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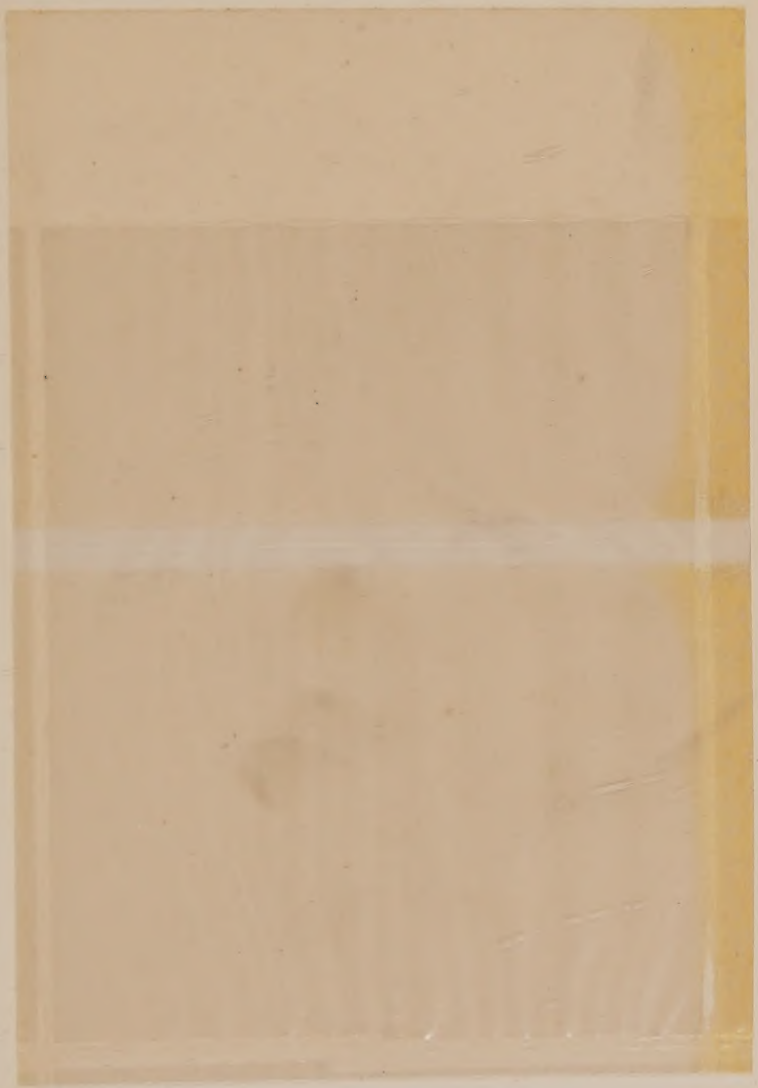

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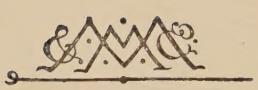

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HENRY HIGGS, C.B.

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PREFACE

In this edition pages 1 to 798 have been printed (with considerable modifications) from the original stereotyped plates. In some cases old matter has been cut out and replaced by words occupying the same space in order to preserve the alphabetical arrangement of the articles and the pagination. To reset the type of this part of the Dictionary in present circumstances would have necessitated a prohibitive price for the volume. Additional articles and continuations of original articles have been included in an Appendix. When an asterisk is added to a title it indicates that the article is in two parts, one in the earlier portion of the Dictionary and one in the Appendix. The reader will not, it is hoped, find serious inconvenience in this separation.

More than thirty years have elapsed since the Dictionary was first prepared. Many eminent contributors to the first edition have passed away, but their articles, little affected by the lapse of time, have generally been allowed to remain in their original form as contributions of permanent historical value. In the opinion of the present editor, a compendium of this character should aim at permanent service. It cannot with advantage discharge the function of supplying the latest statistics of population, finance, imports, exports, etc. For such information the student will naturally turn to annual publications like the *Statesman's Year-Book* or the *Statistical Abstract* or other periodical works of reference. Articles upon legal topics only remotely connected with economics have not been revised or expanded. They could not be omitted from the earlier pages for the reason already stated, but the latest state of the law upon such matters must be sought elsewhere.

Biographical notices of deceased economists, economic history, definitions, and discussions of economic terms and categories, the development of economic thought, lists of economic literature are the staple of a Dictionary of Political Economy. Such information may need additions by successive revisions of the Appendix, but does not become obsolete.

The thanks of the editor are due to Dr. James Bonar for a number of suggestions which testify to his continued interest in the Dictionary of which he was one of the original designers.

HENRY HIGGS.

January 1925.

INTRODUCTION TO THE FIRST EDITION

THE primary object of the *Dictionary of Political Economy* is to provide the student with such assistance as may enable him to understand the position of economic thought at the present time, and to pursue such branches of inquiry as may be necessary for that end.

The table of the contents of the work shows how large is the range of investigation which the student must follow at the present time.

During recent years the course of economic study has extended so widely that it was obviously impossible to restrict the work to the old and formerly well-recognised boundaries. The development of the historical school has opened out new and fertile fields, while the wants of those who follow the mathematical method of study have also to be considered. These two main lines of treatment are here but mentioned as examples. They are far from exhausting the countless ramifications of inquiry now rightly thought necessary for the complete investigation of a study bounded only by the requirements of human life in every social relation.

In making the selection necessitated by the limits of space, the requirements of different classes of students have throughout been borne in mind. On the one side purely business matters, such as banking, the foreign exchanges, and the operations of the mint come in; on the other, subjects of a philosophical character have been dealt with, such as questions of ethics and methods of definition, analysis, and reasoning;—and the ways in which diagrams and mathematical processes may lend assistance to economic inquiry have also been discussed. Again those interested in historical studies require an explanation of words found in early works, and those derived from classical and mediæval times; also of legal phrases, now archaic, together with the modern correlative terms, for only thus can it be understood how ancient usage has influenced present habit. Life in the present day, even in the most modern settlements in the United States, in our British colonies, in the new countries coming into existence in different parts of the world, is influenced largely by the past. The stream of existence, if the simile may be permitted, reaches us deeply coloured by the soil of the fields through which it has flowed by the varied strata of the cliffs—some of them undermined by it—that have bounded its long and devious course.

An endeavour has been made to present under all the subjects treated an

account of the best and most recent authorities; whilst the opinions held in other countries have also, as far as the required limits allowed, been considered and mentioned.

Considerations of space have necessarily confined the scope of the work mainly to the developments of economic study in England, the United States, and our English-speaking colonies—and, in regard to these, an endeavour has been made to present under all the subjects treated an account of the best and most recent authorities; whilst the opinions held in other countries have also, as far as the required limits allowed, been considered and mentioned.

The biographies introduced have been selected with the same end. They show what has actually been written in former times, and hence will enable the reader to trace the progress of economic thought. Much attention has been given to the less-known writers. It is difficult for the student under ordinary circumstances to trace out when such authors lived, the surroundings which influenced their lives, and the opinions they held. While the oversights in science are sometimes as remarkable as the discoveries, these earlier labourers have not unfrequently been the precursors of other and better-known men, and have sometimes anticipated opinions that have held sway for long periods after them.

The different economic schools in the principal countries of the world are also described. Thus this volume contains notices of the American, Austrian, Dutch and English schools, and the French, German, Italian, and Spanish schools will follow in due course.

A work extending over so wide a range of subjects is, necessarily, the production of many minds, of writers whose pursuits, occupations, and studies are very diverse and varied. I desire to record my warm thanks to the contributors to the book, which is, I think, in itself an almost unique example of economic co-operation. Where all have assisted so heartily, it is less easy to select individual names; but I wish to be allowed to express my special thanks to Professor Dunbar, Dr. Keynes, Professor Marshall, Professor Montague, Professor Nicholson, Signor M. Pantaleoni, Mr. L. R. Phelps, Mr. L. L. Price, Mr. E. Schuster, Professor H. Sidgwick, and General Walker for valuable assistance in different directions, and particularly to Dr. Bonar, Professor Edgeworth, Mr. Henry Higgs, and Mr. H. R. Tedder, who have kindly helped in the more arduous labour of the preparation of the work for the press.

This is but an act of justice, that readers may know to whom they are specially indebted.

R. H. INGLIS PALGRAVE

BELTON, NEAR GREAT YARMOUTH,
Christmas 1893.
(HENSTEAD HALL, WRENTHAM, SUFFOLK,
Midsummer 1914.)

TABLE OF CONTENTS OF VOL. I. AND APPENDIX

The numbers immediately following the headings of the Articles are those of the pages on which the Articles will be found. BIOGRAPHIES *in small capitals. An asterisk* (*) *added to the title of an Article indicates that the Article is in two parts, of which one is in the Appendix.*

Abatement or Rebate, 1
ABBOT, C., Lord Colchester, 1
ABEILLE, L. P., 1
Abolitionist, 1
ABOUT, E., 2
Abrasion, 2
Abroad (*see* Jurisdiction), 3
Absentee, 3
Abstinence, 4
Abstract of Title, 5
Abstract Political Economy, 5
Abundance, 5
Acceptance, 6
Acceptilation, 6
Acceptor, 6
Accessio, 6
Accession, Deed of (*see* Bankruptcy in Scotland), 6
Accommodation Bill, 6
Account, 6
Account Duty (*see* Death Duties), 7
Accounts, Merchants' (*see* Prescription, Scotch), 7
Accretion, 7
Accrue, 7
Accumulation, 7
ACHENWALL, G., 7
ACKERSDYK, J., 8
Acknowledgment, 8
ACLAND, Rev. J., 8
Acquittance, 8
Act of Bankruptcy (*see* Bankruptcy in Scotland), 8
Actor Sequitur Forum Rei (*see* Jurisdiction), 8
Actuary, 8
Actus, 9
ADAMS, C. F., 9
ADAMS, H. C., 799
ADDISON, J., 9
Ademption of Legacy, 9
Adjustment, Average, 9
Administration, 10
Administration, Letters of, 14
Administrator, 15
Adulteration, 15
Ad Valorem Duty, 15
Advances, 16
Adventurers, Merchants, 16
Advice, 18
African Companies, Early, 18
African Companies, Recent, 19
AGAZZINI, M., 20
Agency, Law of, 21
Agents of Production, 21
Agio, 22
Agiotage or Agio, 22
Agnati (Adnati), 22
Agricultural Community, 22
Agricultural Gangs (*see* Gangs), 26
Agricultural Holdings Acts, 26
Agricultural Holdings Acts,* 800
Agricultural Systems, 27
Agriculture in England, 27
Agriculture and Fisheries, Ministry of, 801
AICKIN, Rev. J., 30
Aid, Auxilium, 30
Aid. Rate in (*see* Local Taxation), 30
Aides, Cour des, 30
AIKIN, J., 30
AISLABIE, J., 30
Alba Firma, 30
Alcavala, 30
ALCOCK, Rev. T., 31
Aleatory, 31
Ale-taster, 31
ALGAROTTI, F., 31
Alien Immigration, 802
Alieni Juris, 31
Aliens, 31
ALISON, Sir A., 32
ALISON, W. P., 32
Allmend (*see* Agricultural Community), 32
Allonge, 32
Allotment, 32
Allotment,* 803
Allowance, Tare, 33
Allowance System, 33
Alloy, 34
Alloy,* 803
Alod, Alodial Land, 35
Alternative Standard, 35
ALTHUSIUS, J., 36
Altruism, 37
Amana Society, The, 37
Amercements, 37
American School of Political Economy, 37
American School of Political Economy,* 804
Amortisation, 38
Amsterdam, Bank of (*see* Banks, Early European), 38
Analytical Method, 38
Anarchism, 38
Anatocismus, 39
ANDERSON, A., 39
ANDERSON, J., 39
Angarie, Droit d', 40
Angel, 40
Anna, 40
Annates, 40
Annealing, 40
Annual Rent, Scotch, 40
Annuity, 40
ANSELL, C., 42
Antedate, 42
Antichresis, 42
Anti-Corn-Law League, 42
Anti-Rent Agitations, 42
ANTONINUS, St., 43
A Posteriori reasoning, 43
Appanage, 43
APPLETON, N., 43
Applied Economics, 44
Apportionment (No. 1), 44
Apportionment (No. 2), 44
Appraisers, 45
Appreciation of Standard, 45
Apprenticeship, 45
Apprenticeship, Statute of, 46
Appropriation, 47
Appropriation* (Public Finance), 811
Approved Bill, 47
A Priori reasoning, 47
AQUINAS, St. THOMAS, 48
Arable Land, Conversion to Pasture in Great Britain, 49
Arbitrage (Stock Ex.), 50
Arbitrage (General Business), 50
Arbitrage (Exchange), 50
Arbitration between Employers and Employed, 51
Arbitration, International, 811
Arbitration, Scotch, 52
ARBUTHNOT, J., 52
ARBUTHNOT, J., of Mitcham, 52

Arco, G. G., dei Conti d'Arco, 52
Argenson, R. L. de Voyer de Paulmy, Marquis de, 52
Argentarii, 52
Aristocracy, 52
Aristotle, 53
Aristotle,* 813
Arithmetic, Political, 55
Arithmetic, Political, History of, 56
Arithmetical Ratio, 57
Arlès or Arrhes, 57
Armed Neutrality, 57
Armstrong, C., 57
Arnd, K., 58
Arnould, A. M., 58
Arrangement with Creditors (*see* Bankruptcy), 58
Arrangement, Deed of, 58
Arrears, 58
Arrest, 58
Arrestment (Scots law), 58
Arrestment Jurisdictionis Fundandæ causa (*see* Jurisdiction, Scotch), 58
Arrivabene, G., Count, 58
Art of Political Economy, 58
Artél, 59
Articles of Apprenticeship, 59
Articles of Association, 59
Articles of Roup (Scotch), 60
Artisan, 60
Arts and Crafts (*see* Corporations of Arts and Trades), 60
As, 60
Asgill, J., 60
Ashburton, A. B., 60
Ashley, J., 60
Assay, 60
Assessed Taxes, 61
Assessment, 61
Assets, 62
Assiento Treaty, 62
Assignat, 62
Assignation (Scots law term), 64
Assignee, 64
Assignment, 64
Assignment, Deed of, 64
Assignor, 64
Assize of Bread and Beer, 64
Assize of Weights and Measures, 64
Assumption, Deed of (Scots law term), 65
Assurance (*see* Insurance), 65
Assythment (Scots law), 65
Ateliers Nationaux, 65
Atkinson, E., 814
Atkinson, W.. 66
Attachment, 66
Attestation, 67
Attorney, Power of, 67
Attornment, 67
Attwood, T., 67
Attwood, T., and Birmingham School, 67
Aubaine, Droit d', 68
Auckland, W. E., Lord, 68
Auction, 68
Audiffret, C. L. G., Marquis d', 68
Audiganne, A., 69
Audit, 69
Audit (Scots law), 71
Audit Office, 71
Auditor of Court of Session, 72
Augmentations, Court of, 72
Augustinis, M. de, 72
Aulnager, 72
Auncel, or Handsal Weight, 73
Auspitz, R., 814
Austrian School of Economists, 73
Austrian School of Economists,* 814
Authorities, Economic (*see* Political Economy, Authorities on), 73
Autumnal Drain, 73
Auxiron, C. F. J. d', 74
Average, 74
Average (Maritime), 74
Average, Unweighted, 818
Average, Weighted, 818
Averages,* 818
Aves, E., 819
Award, 75
Azuni, D. A., 75

Babbage, C., 75
Babeuf, F. N., 77
Back-Bond (Scots law term), 78
Backwardation, 78
Bacon, F. (Viscount St. Albans), 78
Badger, 78
Bagehot, W., 79
Bailee, 82
Bailey, S., 82
Bailey, S., on Value, 82
Baily, F., 83
Baines, E., 83
Baines, Sir E., 83
Baines, T., 84
Bairn's part of Gear (*see* Legitim), 84
Bakounin, M., 84
Balance of Trade, 84
Balance of Trade, History of the Theory, 85
Balance Sheet, 88
Balance Sheet (2nd Statement), 88
Balbi, A., 89
Baldwin, L., 90
Balsamo, P., 90
Bamford, S., 90
Ban, 90
Banalités, 90
Banco, 90
Bandini, S. A., 91
Banfield, T. C., 91
Banking, 91
Banking,* 819—
Bank of England, 92
Banks, England and Wales, 93
Banks, Scotland, 95
Banks, Ireland, 96
do. British Colonies and Dominions, 97
Bank of France, 97
French banks, 98
Bank of Germany, 98
German banks, 99
Chartered Banks in Scotland, 100
Banks in Canada, 100
Commonwealth Bank of Australia, 819
Imperial Bank of India, 819
South African Reserve Bank, 820
Banks, National, United States of America, 102
Early European Banks—
Amsterdam, 104
Genoa, 104
Hamburg, 105
Middleburg, 106
Rotterdam, 106
Sweden, 104
Venice, 103
Land Banks, 106
do. Germany, 106
Popular Banks, Germany, 109
do. Italy, 109
Savings Banks, 110
Bank Note, 111
Bank Note, Laws in different Countries, 112
Bank Note, United States of America, 113
Bank Note, United States of America,* 820
Bankruptcy in Scotland, 114
Bankruptcy Law and Administration (England), 116
Banks,* 819
Banvin, Droit de, 118
Barbary Co. (*see* Turkey Co.), 119
Barbon, N., 119
Baring, Sir F., Bart., 121
Barnard, Sir J., 121
Barrator, 121
Barrington, Bishop S., 121
Barter, 121
Barter and Exchange, 122
Barton, J., 122
Barton, J.,* 822
Bastiat, F., 123
Bastiat as a Theorist, 124
Batbie, A. P., 124
Bate's Case, or the Case of Impositions, 125
Baudeau, N., Abbé, 125
Baudi, C. di V., 125
Baudrillart, H. J. L., 822
Baumstark, E., 125
Baxter, R. D., 126
Bazaar, 126
Bazard, Saint-A., 127
Bear, 127
Bearer (Securities), 127
Beccaria, C. B. (Marquis), 127
Becher, J. J., 128

Beckmann, J., 128
Bede (Manor), 128
Beeke, Rev. H., 129
Beldam, 129
Bell, W., 129
Bellers, J., 129
Bellitti, G., 129
Belloni, G., 129
Benefice (1), 130
Benefice (2), 130
Beneficium Cedendarum Actionum (Scots law term), 130
Beneficium Competentiæ, 130
Beneficium Divisionis (Scots law), 130
Beneficium Excussionis, 130
Beneficium Inventarii, 130
Benevolences, 130
Bentham, J., 131
Bequest, Power of, 133
Berkeley, G., Bishop of Cloyne, 134
Berlin Decrees (*see* Continental System), 135
Bernard, Sir T., 135
Bernhardi, T. von, 135
Besold, C., 135
Betterment, 136
Betterness, 138
Bezants, 139
Bianchini, L., 139
Biblia, F., 139
Biddle, N., 139
Biel, G., 140
Bigelow, E. B., LL.D., 140
Bill Broking, 140
Bill of Exchange, 142
Bill of Exchange, Law of, 143
Bill of Lading, 145
Bill of Sale, 145
Billon, 146
Bills of Exchange Act, 1882, 822
Bi-Metallism, 146
Birth-rate, 150
Birth-rate,* 823
Biundi, G., 151
Black, D., 151
Black Death, The, 151
Blackleg, 153
Blairie, Droit de, 153
Blake, W., 153
Blanc, J. J. L., 153
Bland Act, 154
Blank Credit, 155
Blank Endorsement, 155
Blank Transfer, 155
Blanqui, J. A., 155
Blench (Scots law term), 155
Block, M., 823
Blockade, 156
Board, 156
Board of Agriculture (1793), 156
Board of Agriculture and Fisheries, 157
Board of Trade, 158
Board of Trade,* 824
Boarding-out System, 159
Boccardo, G., 824
Bocchi, R., 160
Böckh, A., 160
Bocland, 160
Bodin, J., 160
Body Corporate, Corporation, 161
Bœcler, J. H., 161
Böhm-Bawerk, E. von, 825
Boileau (or Boyleau), E., 161
Boisguillebert, P., 162
Bolles, J. A., 162
Bollman, J. E., M.D., 162
Bon, 162
Bonâ fide, 162
Bona notabilia, 163
Bona vacantia, 163
Boncerf, P. F., 163
Bond, 163
Bond of Caution (Scots law term —*see* Caution), 163
Bond of Corroboration (Scots law), 163
Bond and Disposition in Security, 163
Bond of Relief (Scots law term), 163
Bonded Warehouses, 163
Bonnet, V., 164
Bonorum Possessio, 164
Bonus, 164
Book account credit, 164
Book-keeping, 164
Do. Logismography, 165
Book of Rates, 167
Boom, 168
Booth, C., 826
Booty, 168
Bornitz, J., 168
Borough, 168
Borough English, 168
Bosanquet, C., 168
Bosellini, C., 169
Boston Port Bill, 169
Botero, G., 169
Bottomry, Loan on, 169
Boulainvilliers, H. de, 170
Bounties, 171
Bounties, Abstract Theory of, 172
Bounties on Sugar, 173
Bounties on Sugar,* 827
Bourgeois, 174
Bourse, 174
Bourse du Travail, 174
Bowen, F., 175
Boxhorn, M. Z., 175
Boycotting, 175
Bradlaugh, C., 175
Brands and other Certificates of Quality, Government, 175
Brassage, 176
Brassey, T., 176
Bray, C., 176
Bray, J. F., 177
Breach of Trust (Scots criminal law term), 177
Breach of Trust, 177
Breck, S., 177
Brehon law, 178
Brevi Manu Traditio, 178
Brewster, Sir F., 178
Briganti, F., 179
Bright, J., 179
Brindley, J., 179
Briscoe, J., 179
Brissot de Warville, J. P., 179
Broggia, A., 180
Broker, General, 180
Broker, Stock, 181
Brokerage, 181
Brougham, H., Lord, 181
Brown, J., 181
Brydges, Sir E., 181
Bubble Act, 182
Bubbles, History of, 182
Buchanan, D., 183
Buchez, P. J. B., 184
Buckle, T. H., 184
Budget, The, 185
Budget,* 828
Building Societies, 188
Building Societies,* 830
Bülau, F. von, 190
Bull, 190
Bull of Borgia, 190
Bullion, 191
Bullion Committee, Report of, 191
Buonarroti, P., 192
Buquoy, G. F., Count, 192
Bureau of Labour, 192
Bureau of Labour,* 831
Bureau of Labour in U.S., 193
Bureau of Labour in U.S.,* 831
Bureaucracy, 193
Buret, A. E., 194
Burgh, 194
Burgher (*see* Citizen), 194
Buridan, J., 194
Burke, E., 194
Burlamaqui, J. J., 195
Burton, J. Hill (*see* Hill Burton, J.), 195
Büsch, J. G., 195
Büsching, A. F., 196
Butel-Dumont, G. M., 196
Butt, I., 832
Butlerage, 196
Buying in, 196
By-law, Byelaw, 196
By-product, 197
By-products, Theory of Value of, 197

Cabet, E., 197
Cable Transfer, 199
Cadastral Survey, 199
Cadet, F., 200
Cagnazzi, L. S., 200
Caird, Sir J., 833
Cairnes, J. E., 201
Caisse, 203
Call, 203
Calonne, C. A. de, 204
Calvin, J., 204
Cambage, Droit de, 206
Cambist (*see* Exchange Broker), 206
Cambon, P. J., 206

Cambreleng, C. C., 207
Cameralistic Science, 207
Camerarius, J., 208
Campanella, T., 208
Campomanes, P. R., 208
Canals, 208
Canals,* 833
Canard, N. F., 209
Cancel, Cancellation, 209
Cancrin, G., 210
Candareen, 210
Canning, G., 210
Canon Law, 211
Cantalupo, D., 214
Cantillon, P., 214
Cantillon, R., 214
Capello, P. A., 217
Capitainerie, 217
Capital, 217—
History of the Word, 221
Legal ruling that Capital need not be replaced from Profits, 221
Rarely permanent, 222
Capitation (in France), 223
Capitation Taxes, 223
Caraccioli, D., 224
Carafa, D., 224
Carbonari, 225
Cardozo, I. N., 225
Carey, H. C., 225
Carey, M., 227
Carli, G. R., 227
Carlyle, T., 227
Carolus (English), 228
Carolus Dollar, 228
Carrier, Common, 228
Carrying Over, 228
Carrying Trade, 228
Cartel, 229
Cartogram, 229
Carucage, 229
Cary, J., 230
Casaregis, J. L. M. de, 230
Case of Need (*see* Bill of Exchange), 230
Cash, Money, 230
Cash (or Li), 230
Cash Account, 231
Cash Credit, 231
Cash, Sale for, 231
Cashier, 231
Caste, 231
Casuel, 233
Casus, 233
Catallactics, 233
Catasto, 233
Cattaneo, C., 234
Cattle Disease Orders, 234
Caution (Scots law term), 234
Caution, 234
Caveat, 234
Caveat Emptor, 234
Cavour, Count C. B. di, 234
Cayley, E., 237
Cedula, 237
Cens, 237
Census, 238
Census,* 834
Census, United States, 243
Census of Production, 834
Cent, Centesimo, or Centavo, 250
Cent, Dutch, 250
Centesimi, Centimes, Centimos, 250
Centralisation, 250
Cernuschi, H., 835
Certainty, 251
Certificate, Share, 251
Cesare, C. de, 252
Cess, 252
Cessio Bonorum (*see* Bankruptcy in Scotland), 252
Cessionary (Scots law term), 252
Ceva, G., 252
Chadwick, Sir E., 252
Chaffer, 254
Chalmers, G., 254
Chalmers, T., 255
Chamberlayne, E., 256
Chamberlen, H., 257
Chambers of Agriculture, 257
Chambers of Commerce, 258
Chambre Ardente, 260
Chamillart, M. de, 260
Champart, 260
Champion and Severalty, 260
Change, Abbreviation for Exchange, 261
Change (Agents de), 261
Chapman, 262
Charging Order, 262
Charitable Foundations, 262
Charitable Institutions, 264
Charity, 265
Charity Organisation, 266
Charity, State, 268
Charter, 271
Charter Party, 271
Chartism, 271
The Points of the Charter, 272
Chastellux, F. J., Marquis de, 273
Chattel or Chattel Personal, 273
Checks on Population, 273
Cheques, Law of, 273
Cherbuliez, A. E., 274
Chevage, 274
Chevalier, M., 275
Chickering, J., M.D., 277
Chief Rent (*see* Rent Charge), 277
Child, Sir J., 277
Children's Employment, 835
Children's Labour (Factory Acts), 277
Chiminage, 279
Chitti, L., 279
Chorogram, 279
Choses in Action, 279
Choses in Possession, 279
Chrematistic (or Money-making), 279
Christian Socialism, 280
Christianity and Economics—
Church, the Mediæval, Economic Influence of, 280
Roman Catholic School of Economics, 283
Influence of Protestant Thought on Economic Opinion and Practice, 285
Chronogram and Hexogram, 287
Church-Seed, 287
Cibrario, G. A. L., Count, 287
Cinque Ports, 287
Ciompi, 288
Circulating Medium, 288
Citation (*see* Jurisdiction, Scotch), 288
Citation, 288
Cité Ouvrière, 288
Citizen, 289
City—
Ancient, 290
Mediæval, 292
Modern, 295
City of London, Companies of (*see* Companies, City of London), 297
Civil Law, 297
Civil List, 300
Civilisation, 302
Clamageran, J. J., 836
Clarkson, T., 303
Classical Economists, 303
Classification, 303
Clay, H., 304
Clayton, D., 305
Clearing House, The London Bankers',* 837
Clearing System—
Clearing Houses, 305
London Bankers' Clearing House, 306
London Bankers' Clearing House,* 837
Provincial Clearing Houses, 307
Foreign Clearing Houses, 307
Statistics, 309
Other Classes of Clearings, 310
Stock Exchange Clearing, 310
Beetroot Sugar Association, 310
London Produce Clearing, 311
Railway Clearing, 311
Cotton Clearing, 311
Clément, A., 312
Clément, P., 312
Clement, S., 312
Clergy, Benefit of, 313
Client, 313
Client, Stockbroker's, 313
Cliffe Leslie (*see* Leslie, T. E. C.), 313
Clipped Money, 313
Cloff or Clough, 313
Coalitions (*see* Trade Unions), 313
Coasting Trade, 313
Cobbett, W., 314
Cobden, R., 316
Cochut, P. A., 317
Code Napoléon, 317
Codicil, 318

COGNETTI DE MARTIIS, S., 840
COHN, G., 840
Coinage, The Right of, 318
Coinage, Decimal (*see* Decimal System), 318
COKE, R., 318
COLBERT, J. B., 319
Collateral Security (*see* Caution), 320
Collation (*see* Succession, Scotland), 320
Collect, 320
Collective Goods, 320
Collectivism, 320
Collegium, 320
Colonies—
- Colonies, description of, 321
- Colonial Policy, 322
- Colonial Policy,* Recent Developments, 841
- Colonial Lands, 323
- Public Debts of Colonies, 324
- Trade and the Flag, 324
- Methods of Government, 326
- Currency in British Colonies, 326
- Denominational Currency in, 328
- Government of, by Companies, 329
- Government of, by Companies,* 845
- Systems of Colonisation, 333

COLQUHOUN, PATRICK, 334
COLTON, Rev. CALVIN, 335
COLWELL, STEPHEN, 335
Combination—
- Production, 335
- Distribution, 336
- Production and Distribution, 336
- Distribution and Consumption, 336

Combination Laws, 336
Comfort, Standard of, 337
Commandite, Société en, 338
Commerce, 338
Commerce, British (History of), 341
Commercial Instrument, 346
Commercial Intelligence (United Kingdom), 845
Commercial Law, 346
Commercial Routes (History of), 347
Commercial Routes,* 848
Commercial Science, 351
Commercial System, 351
Commercial Treaties, 354
Commissary (*see* Succession, Scotland), 355
Commission Agent, 355
Commissions of Enquiry, 355
Commissions, Judicial, 356
Commissioner (*see* Factor), 357
Commissioners of Sequestrated Estate (*see* Bankruptcy, Scotland), 357
Committee (Lunacy), 357
Committee of Inspection, 357
Commodatum, 357
Commodity, 357
Common Assurance, 358
Common Employment, Doctrine of, 358
Common Good (Scotland), 358
Commons, 358
Commonty (Scotch), 360
Commune, 360
Commune of Paris (1871), 361
Communication, Means of, 361
Communio, 362
Communism, 362
Compagnonnages, 367
Companies—
- Companies, English and Scotch Law, 368
- Increase of, 369
- Increase of,* 852
- Influence on Business, 370
- Companies, City of London, 371
- Companies, Staple, 373
- Companies, Trading (*see* Foreign Trade, Regulation of), 375

Compensation, 375
Competition and Custom, 376
Competition and Regulation, 378
Complementary Goods, 380
Composition (*see* Bankruptcy), 380
Compound Interest, 380
Compromise (Scots law), 380
Comptes, Chambre des, 380
Compulsory Pilotage, 380
Compulsory Preference, 381
Compulsory Taking of Land, 381
COMTE, AUGUSTE, 381
COMTE, AUG., and English Political Economy, 382
COMTE, CHAS., 383
Concession, 384
Conciliation, Boards of, 384
Concourse (Scots law), 385
Concurrence (Scotland), 385
CONDILLAC, E. B. DE, 385
Conditioning, 385
CONDORCET, M. C., Marquis de, 386
CONDUITT, J., 387
Confident Person (*see* Bankruptcy in Scotland), 387
Confirmation of Executor (Scots law), 387
Conflict of Laws, 387
Confusio, 387
CONIGLIANI, C. A., 852
Conjunctur, 387
Conquest, 388
CONRING, H., 388
Conscription, 388
Conseils de Prud'hommes, 389
CONSIDÉRANT, V. P., 852
Consideration, 389
Consignee, 389
Consolidated Fund, 389
Consolidatio, 390
Consols, 390
Conspiracy, Common-Law Doctrine of, 390
Consul, 391
Consular Reports, 391
Consular Reports,* British, 853
Consuls, British, Duties of, 854
Consumables (*see* Consumptibles), 392
Consumers' Goods (or Consumption Goods), 392
Consumers' Rent, 392
Consumptibles. A term employed by the Schoolmen, 393
Consumptibles (modern economic term), 393
Consumption, 393
Consumption, Taxes on, 395
Continuation or Contango, 396
Continental System, 396
Contraband, 398
Contract, 399
Contract, Law of, 401
Contract Note, 402
Contractors, 402
Contractus Trinus (*see* Eck, Johann), 402
Contribution, Contributory (*see* Company), 402
Convention of Royal Burghs of Scotland, 403
Conventional Tariff, 403
Conventional Value, 404
Conversion of British National Debt, 404
Conversion of British National Debt,* 854
Conversion, Colonial and Foreign Stocks, 405
Conversion of Arable Land into Pasture in England, 406
Convertibility of Bank Notes, 407
Conveyance, 408
Coolie System, 408
COOPER, T. (1759-1840), 408
COOPER, T. (1805-1892), 408
Co-operation, 409—
- Co-operative Associations, 409
- Co-operative Farming, 413
- Co-operative Workshops, 415
- Co-operation, Partial (Oldham Cotton Spinning Companies), 417
- Co-operation, Social Aspects of, 418

Coparceners, 420
Copartnership, 855
COPERNICUS, NICOLAUS, 420
COPLESTON, E. (Bishop of Llandaff), 420
Copper Money (England), 421
Copper Money (Sweden), 421
Copyhold, 422
Copyright, 422
- Literary Copyright, 422
- Dramatic Copyright, 422
- Works of Art, 422
- Designs, 422

Copyright in United States, 422
International Copyright, 422
Basis of Copyright, 423
COQUELIN, C., 423
CORBET, T., 423
CORBETTA, E., 423
Corn Laws, 423
Corn Rents, 426
Corn Returns, 426
Cornage, 426
Corner on Stock Exchange, 427
CORNIANI, G., 427
Corporation, Municipal, 427
Corporation, Aggregate, 428
Corporation, Sole, 428
Corporations of Arts and Trades—
England, 428
France, 430
Germany, 431
CORTI, A., 432
CORVAIA, Baron, 432
Corvée, 432
CORVETTO, L.-E., Comte de, 433
Coshery, 434
COSSA, L., 856
Cost (Comparative and Relative), 434
Cost, in the Sense of Price, 434
Cost Book, 434
Cost of Collection of Taxes, 435
Cost of Labour (*see* Cost of Production), 437
Cost of Production, 437
Cost, Relative (*see* Cost, Comparative), 439
COTTERILL, C. F., 856
Cottiers, 439
Cotton Famine (1861-65), 439
Cotton Lists, 441
COTTON, Sir R. B., 441
Coulisse, 441
Council Bills (India Council Drawings), 442
Countervailing Duty, 443
County Borough, 443
County Council, 443
County Rate, 444
Coupon, 444
COURCELLE-SENEUIL, J. G., 857
COURCY, A. DE, 444
COURNOT, A. A., 445
COURT, P. DE LA, 447
Court Rolls, Manorial Accounts and Extents, 447
COURTEN, Sir W., 1572-1636 (*see* Interlopers), 448
Courtier, Broker (*see* Change, Agents de), 448
COURTNEY, L. H., Baron, 857
Courts of Law (England), 448
Courts (Ireland), 449
Courts (Scotland), 449
Coverture, 450
COWELL, J. W., 450
Cowrie, 450
COXE, T., 450
CRADOCKE, F., 451
Craft Guilds (*see* Corporations of Arts and Trades), 451
CRAIG, J., 451
CRAIG, J.,* 857
Credit, 451
Credit, Influence on Prices, 452
Crédit Foncier of France, 454
Credit, Letter of, 455
Criminal Prosecution, 455
Crises, Commercial and Financial, 455
Crises (1857-1866-1890), 462
Crises, Periodicity of, 466
CROMBIE, A., 467
CROME, A. F. W., 467
Cross Drawing, 468
Crossed Cheque, 468
Crown Debts, 468
Crown, English (Gold Coin), 468; Silver Coin, 468
Crown (Scandinavian), 468
Crown Lands, 469
CRUMPE, S., 469
Crusade, 469
Crusades, Economic Effects of, 469
Culpa, 470
CULPEPER, Sir T. (the elder), 470
CULPEPER, Sir T. (the younger), 470
Culture, Large and Small, 470
Cum Dividend, 472
CUNNINGHAM, W., 858
Curator Bonis, 472
Currency, 472
Currency Doctrine or Principle, 472
Currency (or Treasury) Notes, 860
Curves, 473
Curves,* 861
CUSTODI, P., 474
Custodia, 474
Custom, Customs Duties, 474
Custom, Habit, 476

DAIRE, E., 477
DALBIAC, General Sir J. C., 478
DALRYMPLE, Sir J., 478
Damages, 478
Damages, Measure of, 479
DAMETH, H., 479
Damnum Emergens, 479
Damnum Fatale (Scot.), 480
Danegeld, 480
DANGEUL, Marquis de Plumart, 480
DANSON, J. T., 861
Darg, 481
Daric, 481
Darien Company, 481
Darwinism, 481
Date of Drawing, 482
Davach, 482
DAVANZATI, B., 482
DAVENANT, C., 483
DAVIDSON, J., 862
DAVIES, DAVID, D.D., 484
DAVILA, EL PADRE BÁUTISTA, 485
DAVILA Y LUGO, Don Francisco, 485
Day, Day Work, and Diet, 485
Days of Grace, 485
Dead Freight, 486
Deadly, Warrandice against All (Scot.), 486
Dead Rent, 486
Dead's Part (Scot.), 486
Deadweight Annuity, 486
Dealer (Stock Exchange), 486
Dearness, Artificial, 487
Dearth (*see* Famine), 490
Death Duties, 490
Death-rate—
Analysis, Definition of Subject, 493
Death-rate as Factor in increase of Population, 493
Causes of Variation in Death-rate, 494
Death-rate, as indicating National Prosperity, 497
In relation to Insurance, 497
Debasement of Coin, History of the, 498
Debenture, 501
Debenture Stock, 502
Debit, 503
Debitum Fundi (Scot.), 503
Débouchés, Théorie des, 503
DE BROUCKÈRE, C., 503
Debt—
Debt, 503
Imprisonment for, 504
Debtor and Creditor, Law of, 505
Debtor's Summons, 506
Debts, Public, 506
Debt, Public, Statement of, 509
Debts, Public, Local, Great Britain and Ireland, 509
DE CARDENAS DI MAQUEDA, D. R., 513
Decentralisation, 513
Decimal System (Coinage, Weights and Measures), 514
Decime, 518
Décimes, 518
DECKER, Sir M., 518
Declaration of London, 1909, 862
Declaration of Paris, 520
Declaration of War, 521
Declared and Real Values, 521
Decreasing Returns (*see* Diminishing Returns), 522
Decree of Registration (Scot.), 522
Deductive Method, 523
Deed (Scot.), 526
Deed of Arrangement, 527
Deed Poll, 529
Defalcation, 529
Defence, 529
Defence, Cost of, 529
Deferred Payments, 532
Deferred Stock, 532
Deficiency Advances, 533

Deficiency Bills, 533
Deficit, 533
Definitions, 534
Defoe, D., 535
Degree of Utility, 536
De la Court (*see* Court, Pieter de la), 537
De Lajonchère, 537
De la Mare, N., 537
Del Credere, 537
Delegation, 537
Delfico, M., 537
Delictum, 538
Delivery (of Bills of Exchange), 538
Delivery (of Deeds,—*see* Deed), 538
Delivery (of Chattels), 538
Delivery, Good, 539
De Luca, G. B., 539
Demand, 539
Demand Curves, 542
Demand Schedules (*see* Demand), 544
Demesne, 544
De Metz-Noblat, A., 544
Demise, 544
Demography, 544
Demoivre, A., 545
Demology (*see* Demography), 546
Demonetisation, 546
Demonstrative Legacy, 546
Demurrage, 546
Denarius, 546
Denarius Dei, 547
Denier (Coin), 547
Denier (Tax), 547
Denier (as denoting Price), 547
Deniers de Calais, 547
Denizen, 548
Denny, W., 548
Denominational Currency (*see* Colonial Currency), 548
Denominations of Bank Notes, 548
Denominator, Common, 549
Deodand, 549
Deparcieux, A., 549
De Parieu (*see* Parieu, Esquirol de), 550
Department, 550
Department (France), 551
Depopulation (Term), 551
Depopulation (in Relation to Economic History), 551
Depopulation (Causes), 552
Deposit (Sales of Land), 559
Deposit (Deposits, Banking), 559
Deposition, 560
Depositum, 560
Depôts et Consignations (Caisse des), 560
Depreciation, 561
Depreciation of Monetary Standard, 562
Depression, Agricultural, 563
Depression of Trade, 565
Deputy, 568
De Quincey, T., 568
Derelict, 570
Derelictio, 570
De Sanctis, M. A., 570
Descent of Property, 570
Designs, Copyright in, 571
Desmarets, N., 571
Destutt de Tracy, A. L. C., 572
  Destutt de Tracy and Ricardo, 572
Détraction, Droit de, 572
Devas, C. S., 864
Development, 572
De Vio, F. T., 573
Devise, 573
Dew, T. R., 573
Diagrams, 574
Dialogus de Scaccario, 576
Dica, 576
Dickinson, J., 576
Dickson, Rev. A., 577
Diderot, D., in his relation to Economics, 577
Dieterici, K. F. W., 579
Differential Duties (*see* Discriminating Duties), 579
Difficulty of Attainment, 579
Diffusion Theory of Taxation, 582
Digges, Sir D., 582
Diligence (Scot.), 582
Diligentia, 582
Dime, 582
Dîme Royale, 583
Dimensions of Economic Quantities, 583
Diminishing Returns, 585
Diminishing Utility (*see* Utility), 586
Dinar (Ancient), 586
Dinar (Modern), 586
Diodati, D., 586
Diodati, L., 586
Direct Taxation, 586
Directors, Legal Duty of,* 587
Dirom, Major A., 587
Disabilities of Aliens, 587
Disabilities of Infants, 587
Disabilities of Lunatics and Drunkards, 588
Disabilities of Married Women, 588
Discharge (Scot), 588
Discharge in Bankruptcy, 589
Disclaimer, 589
Discommodity, 589
Discount, 589
Discount, French Stock Exchange, 590
Discount, London Stock Exchange, 590
Discount Houses (*see* Bill Broking), 591
Discoveries, Geographical (Influence on Trade of), 591
Discoveries of Precious Metals (*see* Precious Metals, Discoveries of), 591
Discovery in Actions, 591
Discriminating or Differential Duties, 591
Discussion (Scot.), 592
Diseases of Animals Acts, 864
Dishonour of a Bill, 592
Disposition (Scot.), 592
Distance in Time as an Element of Value, 592
Distress, 594
Distress (legal term), 594
Distribution (or in full The Distribution of Wealth), 595
Distribution, Ethics of, 596
Distribution, Law of, 599
Distribution (uses of the term), 602
Distribution, Cost of (*see* Production and Distribution), 603
Distribution, Statutes of, 603
Distribution of the Precious Metals, 603
Distributive Justice, 606
Distringas, 606
Disutility (*see* Discommodity), 606
D'Ivernois, Sir F. (*see* Ivernois, Sir F. d'), 606
Dividend (on Stock and Shares), 606
Dividend (Mediæval), 607
Dividend (in Bankruptcy), 607
Dividend Warrant, 607
Divisibility of Money. Divisions of Money, 608
Division of Labour, 608
Dizain, 611
Dobbs, A., 611
Dock, 611
Docks,* 866
  Development of the Modern Dock System, 611
  London Docks, 611
  Provincial Dock Development, 613
  Dock Warrants, 615
  Effect of Economic Changes upon Docks, 615
  List of Mercantile Docks in the United Kingdom, 616
  Competition in relation to Docks, 621
  Incidence of Dock Charges, 621
  Dock Finance, 621
  Dock Ownership, 621
  Ownership of, by Railways, 867
  Public Ownership, 621
    (1) Management, 621
    (2) Public Convenience, 621
    (3) Finance, 621
Dock Labour, 622
Dock Warrant, 623
Docks,* 866

Docquet, 623
Doctrinaire, 623
Doctrine of Population—Malthus (*see* Malthus, Rev. T. R.; Population), 624
Dogma, 624
Doitkin, 625
Dole-Fish, 625
Doles, 625
Dollar, 626
History of, 626
Of Account, 627
Hard (Stock Exchange use of word), 627
Hard (Spanish), 627
United States, 627
Trade (United States), 627
Maria Theresa or Levantiner Thaler, 628
Mexican, or Peso, 628
South and Central American Republics, and British Honduras, 628
Spanish (*see* Hard Dollar), 628
Dolus, 628
Domaine, 628
Dombasles, A. M. de, 628
Domesday Book, 629
Domestic System of Industry, 630
Domicil or Domicile, 631
Domicile (Scotland), 632
Domiciled Bill, 632
Dominium, 632
Domus Conversorum (*see* Jews in England), 632
Donatio Mortis Causa, 632
Donation (Scotland), 632
Donato, N., 632
Don Gratuit, 632
Doria, P. M., 633
Dormant (or Sleeping) Partner, 633
Dormer, D. J., 633
Dos, 633
Doses (of Capital), 633
Douane, (Fr. Customs), 633
Double Entry (*see* Book-keeping), 634
Doubleday, T., 634
Double-Florin, 634
Double Standard (*see* Bimetallism; Standard of Value), 634
Doubloon, History of, 634
Doubloon, 635
Douglass, W., 635
Dove, P. E., 635
Dowell, S., 867
Dower, 636
Drachma, 637
Drafts on Demand (*see* Cheques, Law of), 637
Drago Doctrine, 867
Dragonetti, G., 637
Dragonetti, L., 637
Drain of Bullion, 637
Drain of Bullion,* 868
Drake, J., 639
Drapier's Letters, 639
Drawbacks, 640
Drawer of a Bill of Exchange, 640
Drawing, 640
Drengage, 641
Drinks, Taxes on (*see* Taxes), 641
Drofland, or Dryfland, 641
Droit, Annuel (*see* Paulette), 641
Droits of Admiralty, 641
Droits d'Aubaine (*see* Aubaine), 641
Droz, J., 641
Droz, N., 869
Drummond, H., 641
Drunkards, Legislation respecting, 642
Dry Exchange (*Cambium siccum*), 643
Dry Rent (*Rent sec*), 643
Dubos, Abbé J. B., 643
Ducat, History of, 643
Ducat (Modern), 644
Duchatel, Comte T., 644
Ducpetiaux, E., 645
Due (*gerihta, rectitudo, rectum*), 645
Due Date (Bill of Exchange), 648
Dufau, F. P., 648
Duhamel du Monceau, H. L., 648
Dumoulin (*see* Molinaeus), 648
Dunbar, C. F., 869
Duncan, H., D.D., 648
Duncan, John, 650
Duncan, Jonathan, 650
Dundas, H., 650
Dunning, R., 650
Dunoyer, C., 650
Duodecimal System, 651
Dupin, Baron C., 651
Dupin, Claude, 652
Dupont, (Du Pont), P. S., de Nemours, 652
Dupont-White, C., 653
Dupré de Saint-Maur, N. F., 654
Dupuit, A. J. E., 654
Duquesnoy, A. C., 655
Duration of Life (as an element of well-being), 655
Dussard, H., 655
Dutch Auction (*see* Auction), 655
Dutch School of Economists, 656
Dutens, J. M., 660
Dutot, 660
Duty, Customs (*see* Customs), 660
Duty, Export (*see* Exports, Duties on), 660
Duty, Import (*see* Import Duties), 660
Duty, Legacy, Probate, Succession (*see* Death Duties), 660
Du Verney (*see* Paris Du Verney), 660
Duvillard de Durand, E., 660
Dwellings, Industrial, 660
Dwellings, Model, of Working Classes in France, 664
Dwellings (Regulations by the State in England), 665
Eagle, 667
Earnest Money, 667
Earnings and Interest Fund, 667
Earnings of Management, 667
Easement, 668
Easterlings, 668
East India Company, 669
Eastland Company, 672
Eaton, D. I., 673
Ebaudy de Fresne, 673
Eck, J., 673
Economic Freedom, 674
Economic Goods (*see* Goods, Economic), 674
Economic Harmony, 674
Economic History, 675
Economic Law, 676
Economic Libraries, 870
Economic Man, 676
Economics(*see*Political Economy), 677
Economic Science and Economics, 677
Economics, Teaching of, 875
Economistes, 679
Ecu, 679
Eden, Sir F. M., 679
Edgeworth, M., 680
Edmonds, T. R., 681
Education, Economic Aspects of, 681
Edwards, B., 681
Edwards, G., M.D., 682
Effects, 682
Effectual Demand, 682
Efficiency of Labour, 682
Efficiency of Money, 685
Egoism, 685
Egron, A. C., 687
Eight-Piece, 687
Eight Hours Movement, 687
Einert, C., 690
Eisdell, J. S., 690
Eiselen, J. F. G., 690
Eject, Ejectment, Ejection, 690
Elasticity, 691
Elasticity of Demand (*see* Demand), 691
Elder, W., 691
Election, 691
Elegit (Writ of), 692
Elevator, 692
Elibank, P. M., 692
Eliot, F. P., 692
Elizabethan Legislation (*see* Legislation), 693
Elking, H., 693
Elliott, E., 693
Ellis, W. (1758), 693
Ellis, W. (1800-81), 693
Ellman, J., 694
Élus, 694
Emancipation, 694
Embargo, 695

Embezzlement, 696
Emblements, 696
Emerson, Gouverneur, M.D., 696
Emigration, its Effect on the Country of Origin, 696
Eminent Domain, 702
Emmery de Sept Fontaines, H. C., 703
Empanel, 703
Emphyteusis, 703
Empiricism, 703
Employers and Employed, 704
Employers' Liability Act, 706
Employing Class, 707
Employment, 707
Employment of Women and Children in Agriculture (*see* Female Labour), 708
Employments (*see* Occupations), 708
Emption, 708
Emptio-Venditio, 708
Emulation, Effects of, on Society, 708
Encabezamiento, 709
Enclosures, 709
Encomienda, 712
Encroachment (*see* Trespass), 712
Encyclical, Papal, on Labour (1891), 712
Endorsement (*see* Bill of Exchange), 713
Endowments, 713
Enemy Goods, 714
Enfaced Paper or Rupee Paper, 715
Enfacement, 715
Enfantin, P., 715
Enfranchisement, 716
Enfranchisement of Land from Copyhold and similar Tenures, History of, 717
Engel, E., 883
Engels, F., 884
Engineering and Allied Industry Agreements, 884
English Early Economic History, 719
English School of Political Economy, before Adam Smith, 730
English School of Political Economy, Modern Economics, 733
Engrossing (*see* Forestallers and Regrators), 737
Enregistrement, 737
Ensenada, Z., Marquis, 737
Entail, Law of, 738
Entail (Scotland), 740
Entrepôts, 741
Entrepreneur, 741
Entry, Bill of, 742
Entry, Right of, 742
Enumerated Commodities, 743
Éphémérides, 743
Épices, 747
Equalisation of International Demand, 747
Equality, 748
Equation of Supply and Demand (*see* Demand), 749
Equilibrium, 749
Equitable Assets, 749
Equitable Estate, 749
Equitable Execution, 749
Equitable Mortgage, 749
Equitable Waste, 750
Equity, 750
Equity of Redemption, 751
Equity to a Settlement, 751
Error Excepted, 751
Error, Law of, 751
Error, Law of,* 886
Escheat (historical), 753
Escheat (modern law), 754
Escudo, 754
Escusado, 754
Essart, Exart, or Assart, 754
Estate, 754
Estate Duty (*see* Death Duties), 755
Estcourt, T., 755
Esterno, P., 755
Estimo, 755
Estoppel, 756
Estovers, 756
États Généraux, The, or States General of France, 756
Ethel (*see* Alod), 756
Evans, D. M., 756
Evans, T., 757
Evelyn, J. (1620-1706), 757
Evelyn, J. (1830), 757
Everett, A. H., 757
Everett, G., 757
Eviction, 758
Evolution (*see* Development), 758
Ex. All, 758
Examples, 758
Excambion, 758
Exchange, 758—
Value in, 759
Value in. History of Growth of Theory, 762
Usury (*see* Usury), 767
As Bourse, 767
Stock, 768
Stock, Provincial, in Great Britain and Ireland, 770
Foreign, 770
Foreign, practical working of, 772
Between Holland and Dutch India, 773
Between Great Britain and British India, 776
Internal, 777
Of Notes, 778
Broker, 778
Exchanger, Royal, 778
Exchequer, 779—
Early History of, 779
Present Constitution of, 781
(Scotland), 784
Bill, 784
Bill, History of, 784
Bond, 785
Bond, History of, 785
Closing of the, 786
Excise, The, 786
Excise Scheme of Sir R. Walpole, 788
Ex. Dividend, 789
Ex. Drawing, 789
Execution, 789
Executor, 789
Executry (Scottish), 790
Exercitor (Scottish), 790
Exhereditatio, 790
Ex. New, 790
Expectation of Life, 790
Expeditation, 790
Expenditure or Spending, 790
Expenses of Production (*see* Production), 790
Experience, 790
Experimental Methods in Economics, 791
Expert, 792
Expertise (French), 793
Exploit, 793
Exports and Imports (*see* Imports and Exports), 794
Exports, Duties on, 794
Exports, Invisible, 886
Expropriation, 797
Extensive Cultivation (*see* Intensive), 798
Extents (*see* Court Rolls, Manorial Accounts, and Extents), 798
Extraneus, 798
Eyton, R. W., 798

Appendix 799
List of Abbreviations used in Index 888
Index 889
List of Contributors 921

THE great art therefore of political œconomy is, first to adapt the different operations of it to the spirit, manners, habits, and customs of the people; and afterwards to model these circumstances so, as to be able to introduce a set of new and more useful institutions.

The principal object of this science is to secure a certain fund of subsistence for all the inhabitants, to obviate every circumstance which may render it precarious; to provide everything necessary for supplying the wants of the society, and to employ the inhabitants (supposing them to be free men) in such a manner as naturally to create reciprocal relations and dependencies between them, so as to make their several interests lead them to supply one another with their reciprocal wants.—SIR JAMES STEUART, *Inquiry into the Principles of Political Œconomy.*

The more extended our research becomes, the more we find that knowledge is a thing of slow progression, that the very notions which appear to ourselves new have arisen, though perhaps in a very indirect manner, from successive modifications of traditional opinions. Each word we utter, each thought we think, has in it the vestiges, is in itself the impress, of antecedent words and thoughts.—SIR W. R. GROVE, *Correlation of Physical Forces.*

DICTIONARY OF POLITICAL ECONOMY

ABATEMENT—ABOLITIONIST

ABATEMENT or REBATE. A deduction, drawback, or decrease made. A proportionate reduction of a payment allowed for special reasons—*e.g.* for prompt payment. E. S.

ABBOT, CHARLES, afterwards Lord Colchester (born 1757, died 1829), entered parliament in 1795, and became chairman of Pitt's finance committee 1797. He carried in 1800 a bill for charging public paymasters with the payment of interest on sums in hand. He was also the initiator of the commission of inquiry into the public records in the same year. But perhaps his chief title to fame is his introduction, in 1800, of the motion for a complete census of Great Britain. In spite of some opposition the Population Act, as it was called, was duly passed, and its provisions carried into force in the next year (see CENSUS). As speaker (elected 1802) he gave his casting vote against Lord Melville in 1805. On his retirement from the House of Commons in 1817 he was made a peer, and received a pension of £4000 a year. He devoted his later years to foreign travel, and to the improvement of roads in the Scottish highlands. J. B.

ABEILLE, LOUIS PAUL (born 1719, died 1807), became secretary of the Agricultural Society of Brittany, established through GOURNAY's influence in 1757. He was an ardent physiocrat, and argued (1763) for free trade in corn, along with QUESNAY, MORELLET, and the elder MIRABEAU. Writing later on the same subject (1768) he fell into the fallacy that high corn prices make high wages. DUPONT speaks of his style as "cold and heavy" but "clear." He wrote occasionally in the *Journal d'Agriculture* of Paris, when Dupont became its editor in 1765; but he seems never to have been on very good terms with that economist. When he was chosen inspector-general of manufactures (1768) his ardour seems to have cooled down, and he is not to be reckoned among the few who upheld the physiocratic cause after TURGOT's death in 1781. His writings include (besides the *Corps d'Observations* of the Breton Agricultural Society) the following:—

Lettre d'un négociant sur la nature du commerce des Grains, Paris, 1763.—*Réflexions sur la police des Grains en Angleterre et en France*, Paris, 1764.—*Effets d'un privilège exclusif sur les droits de propriété*, Paris, 1764.—*Principes sur la liberté du commerce des Grains*, Paris, 1768.—*Faits qui ont influé sur la cherté des Grains en France et en Angleterre*, Paris, 1768.—*Mémoire présenté par la Société Royale d'Agriculture sur l'usage des domaines congéables*, Paris, 1791.—*Mémoire en faveur d'Argant*, the inventor of the "Argand" lamp, Geneva, 1785.—*Mémoire à consulter (on the subject of the French East India Company)*, Paris, 1768.—[See Schelle's *Dupont de Nemours et l'école Physiocratique* (1888) *passim*, Daire's *Physiocrates*, 1846 (*e.g.* p. 38).] J. B.

ABOLITIONIST. A term applied specially to the social reformers headed by Thomas CLARKSON, who advocated and carried the abolition of the slave-trade in the British dominions; and applied generally to all who have aimed at abolishing either the trade in slaves or the institution of SLAVERY, whether in the British dominions or elsewhere.

The causes which contributed to abolition in the first sense are arranged by Clarkson (*q.v.*), the historian of the movement, in four divisions, quaintly illustrated by four confluent streams (*History of the Abolition of Slave-Trade*, 1808, p. 259). The four classes of abolitionists may be summarily described as (1) miscellaneous, mostly literary (Pope, Thomson, etc.); (2) Quakers in England; (3) Quakers in America; (4) Clarkson himself, with his fellow-workers. In 1787 the first committee for the abolition of this trade was formed by Clarkson and his associates. At first their efforts were devoted to the abolition only of the trade in slaves, as the abolition of slavery itself seemed hopeless. In 1789 Wilberforce introduced a measure into parliament, founded upon Clarkson's materials, but it was not till 1807 that the bill for the abolition of the slave-trade passed the House of Commons, and not till 1833 that British colonial slavery was abolished by act of parliament. The abolition of slavery in the British dominions gave prominence to two points of economic interest—the inefficiency

of slave labour, and the right to compensation in case of expropriation, even when the kind of property has received the most severe public moral condemnation.

The movement towards liberty, initiated by England, has been continued by most of the continental nations at varying rates down to the present time. Denmark, indeed, has the honour of anticipating the action of England. In 1792 it was ordered that slave-trade should cease in Danish dominions after 1802. In the United States the movement in favour of abolition is coeval with the union. Before the end of the 18th century, or early in the beginning of the 19th, slavery was abolished in many of the original states. The admission of new states has more than once raised the question, within what limits should slavery be tolerated? Thus, on the admission of Missouri, the boundaries within which slavery was permitted or prohibited were carefully defined by the "Missouri compromise" (1820). That arrangement was at a later period (in the case of Dred Scott, 1856-57) interpreted unfavourably to the cause of abolition. The indignation of abolitionists was roused by the cruel administration of the fugitive slave law and other iniquities. Slavery was a cause, and abolition a result, of the Civil War 1861-65.

The economic questions connected with American slavery have been well treated by CAIRNES in his work on the *Slave Power* (see SLAVERY). See also, with reference to America, H. GREELEY, *The American Conflict*, 1865. Clarkson published in 1808 a *History of the Abolition of the Slave-Trade* (2 vols.)

J. S. N.

ABOUT, EDMOND (member of the *Académie Française*), born at Dieuze (Lorraine), 1828, died at Paris, 1885. It was especially as a novelist that About made his reputation, and it is to be regretted that politics, after 1871, reduced this inimitable romance writer, who had produced such works as the *Roi des Montagnes* and the *Mariages de Paris*, to the position of a mere editor of a journal (the *XIX. Siècle*). The works which should be noticed in this place were written between the purely literary period and the more *militant* period of About's animated life. In *Maître Pierre* (1858) and the *Lettres d'un bon jeune homme* (1860) About, as a passionate admirer of the wonders of human industry, and the conscientious defender of the principles of *laissez faire laissez passer*, still writes as a novelist and a story-teller. But genuine didactic works followed. We may cite *le Progrès* (1864) and *l'A B C du travailleur* (1868), *l'Assurance* (1865) and *le Capital pour tous* (1869). In these last-named works the author limits himself to setting forth the principles which others had formulated before him, while he denounces certain errors of interpretation. Though About may be described as only a *populariser*, he yet deserves consideration from the students of economic science, to which, for ten years, he devoted all the resources of his humour, imagination, and incomparable style.

A. DE F.

ABRASION. The abrasion or loss by wear and tear of the coins in use is an important factor in the cost of a metallic circulation. This differs between one country and another according to the hardness of the coin which results from the description of ALLOY employed, to the surface of the coin exposed to wear in proportion to its bulk, to the greater or less employment of coin in circulation. At the present time the wear of the principal gold coin of the British empire (SOVEREIGN) is very considerable. The investigation set on foot by JEVONS in 1868 shows that the sovereign in ordinary use loses on an average ·043 of a grain annually. In other words, the wear and tear of an English sovereign appears to be at the rate of $\frac{3\,8\,6}{1\,0\,0\,0\,0\,0\,0}$ parts, or something less than one-tenth of a penny per annum (J. B. Martin, "Media of Exchange," *Journal of Statistical Society*, 1884, p. 489). The standard weight is 123·274 grains, and the lowest weight of legal currency 122·5 grains, so that the sovereign loses the ·774 grains, which reduces it below legal tender, on an average in about 15·7 years. In the case of the HALF-SOVEREIGN, the difference between standard weight and the lowest current weight is ·512 grains; and as the yearly loss of the half-sovereign averages ·069 grains, these coins are reduced below legal tender weight generally in the short period of seven and a half years. The wear of the English coinage cannot, however, be taken as the criterion of the wear of all coinages everywhere, as varying rapidity of circulation, use of small paper representatives of money, etc., cause great differences between one country and another. The estimates of the actual amount differ very greatly from each other; one made by JACOB, which includes the wear both of gold and silver coins, is of "one part in three hundred and sixty annually" (Jacob on the *Precious Metals*, vol. ii. p. 186).

[For detailed information see *An Historical Inquiry into the Production and Consumption of the Precious Metals*, W. Jacob, London, 1831 (2 vols.) —"Paper on the Condition of the Gold Coinage of the United Kingdom," W. S. Jevons, *Journal of the Statistical Society of London*, reprinted with much similar information in Jevons's *Investigations in Currency and Finance*.—See also paper by John B. Martin, "Our Gold Coinage," *Journal of the Institute of Bankers*, June 1882.—Paper by R. H. Inglis Palgrave, "The Deficiency in Weight of our Gold Coinage, with a Proposal for its Reform," March 1883; "The Gold Coinage," December 1884 (both in *Journal, Institute of Bankers*).—*Reports of Deputy Master of Mint*, particularly those for 1883, 1884, 1885, and *passim*,—and *Evidence and Reports Royal Commission on Recent Changes in the Relative Values of the Precious Metals*, which

includes a translation of A. Soetbeer's *Materials for the Illustration and Criticism of the Economic Relations of the Precious Metals, and of the Currency Question.—Evidence and Reports Royal Commission on Depression of Trade and Industry*, 1886.]

ABROAD. See JURISDICTION.

ABSENTEE. An absentee may be variously defined (1) as a landed proprietor who resides away from his estate, or (2) from his country; or more generally (3) any unproductive consumer who lives out of the country from which he derives his income.

Examples of these species are (1) a seigneur under the *ancien régime* living in Paris at a distance from his estates; (2) an Irish landlord resident abroad; (3) an Anglo-Indian ex-official resident in England and drawing a pension from India. In writing briefly on the evils of absenteeism it is difficult to use general terms appropriate to all the definitions; but considerations primarily relating to some one definition may easily be adapted to another by the reader.

It is useful to consider separately the effects of the absentee proprietor's consumption upon the wealth of his countrymen; and the moral, as well as economical effects of other circumstances.

I. The more abstract question turns upon the fact that the income of an absentee is mostly remitted by means of exports. "The tribute, subsidy, or remittance is always in goods . . . unless the country possesses mines of the precious metals" (Mill). So far as the proprietor, if resident at home, would consume foreign produce, his absence, not increasing exports, does not affect local industry. So far as the proprietor's absence causes manufactures to be exported, his countrymen are not prejudiced. For they may have as profitable employment in manufacturing those exports as, if the proprietor had resided at home, they would have had in supplying manufactured commodities or services for his use. But if the proprietor by his absence causes raw materials to be exported, while if present he would have used native manufactures and services, his absence tends to deprive his countrymen of employment, to diminish their prosperity, and perhaps their numbers. This reasoning is based on SENIOR'S *Lectures on the Rate of Wages* (Lecture II.), and *Political Economy* (pp. 155-161). Senior's position is in a just mean between two extremes, —the popular fallacy and the paradox of M'CULLOCH. On the one hand it is asserted that between the payment of a debt to an absentee and a resident there is the same difference as between the payment and non-payment of a tribute to a foreign country. On the other hand it is denied that there is any difference at all. The grosser form of the vulgar error, the conception that the income of the absentee is drawn from the tributary country in specie, is exemplified in Thomas PRIOR'S *List of Absentees* (1727). M'Culloch's arguments are stated in the essay on "Absenteeism" in his *Treatises and Essays on Money*, etc., and in the evidence given by him before some of the parliamentary commissions which are referred to below. Asked "Do you see any difference between raw produce and manufactured goods," M'Culloch replies, "I do not think it makes any difference" (compare *Treatises and Essays*, p. 232). He appeals to observation, and finds that the tenants of absentee landlords are "subjected to less fleecing and extortion than those of residents."

J. S. MILL attributes to absenteeism a tendency to lower the level of prices in the country from which the absentee draws an income; with the consequence that the inhabitants of that country obtain their imports at an increased cost of effort and sacrifice (*Unsettled Questions*, essay i. p. 43). Mill's meaning may be made clearer by a study of the rest of the essay which has been cited, and of the parallel passage in his *Political Economy* (bk. v. ch. iv. § 6), where he argues that an inequality between exports and imports results in an "efflux of money" from one country to another.

Upon less distinct grounds QUESNAY connects absenteeism with a development of trade and industry in an unhealthy direction (*Œuvres*, éd. Oncken, p. 189). Among recondite considerations which may bear on the subject should be mentioned CANTILLON'S theory concerning the effect of the consumption of the rich on the growth of population (*Essai*, pt. i. ch. xv.)

II. Other economical advantages lost by absenteeism are those which spring from the interest which a resident is apt to take in the things and persons about him. Thus he may be prompted to invest capital in local improvements, or to act as an employer of workmen. "It is not the simple amount of the rental being remitted to another country," says Arthur YOUNG, "but the damp on all sorts of improvements." D'ARGENSON in his *Considérations sur le gouvernement ancien et présent de la France* (1765, p. 183), attributes great importance to the master's eye.

The good feeling which is apt to grow up between a resident landlord and his tenantry has material as well as moral results, which are generally beneficial. The absentee is less likely to take account of circumstances (*e.g.* tenant's improvements), which render rack-renting unjust. He is less likely to make allowance for calamities which render punctual payment difficult. "Miseries of which he can see nothing, and probably hear as little of, can make no impression," A. YOUNG. He is glad to get rid of responsibility by dealing with a "middleman," or intermediate tenant—an additional wheel in the machinery of exaction, calculated to grind relentlessly those placed underneath it. Without the softening influence

of personal communication between the owner and the cultivator of the soil, the "cash nexus" is liable to be strained beyond the limit of human patience, and to burst violently. There can be little doubt but that absenteeism has been one potent cause of the misery and disturbances in Ireland. The same cause has produced like effects in cases widely different in other respects. The cruellest oppressors of the French peasantry before the Revolution were the *fermiers*, who purchased for an annual sum the right to collect the dues of absentee seigneurs. The violence of the GRANGER Railway legislation in the western states of America is attributed to the fact that the shareholders damnified were absentee proprietors (Seligman, *Journal of Political Science*, 1888).

There are also the moral advantages due to the influence and example of a cultivated upper class. The extent of this benefit will vary according to the character of the proprietors and the people. In some cases it may be, as Adam SMITH says, that "the inhabitants of a large village, after having made considerable progress in manufactures, have become idle in consequence of a great lord having taken up his residence in their neighbourhood." The opposite view, presented by Miss EDGEWORTH in her *Absentee*, may be true in other states of civilisation. Perhaps the safest generalisation is that made by Senior that "in general the presence of men of large fortune is morally detrimental, and that of men of moderate fortune morally beneficial, to their immediate neighbourhood."

[The references cited below are to be added to those which have been already made. They fall under two heads : (*a*) the unfortunately large class relating specially to Ireland, and (*b*) Miscellaneous. (*a*) The Act 3 Richard II. and 28 Henry VIII, inflicting on absentees forfeiture of two-thirds of the yearly profits from their lands. These and other acts relating to absentees are cited in *Tracts and Treatises Illustrative of . . . Ireland* (reprinted by Thom), 1840. The index to this work, under the heading "Absentees" gives some other useful references. SWIFT, *Seventh Drapier's Letter* (vol. vii. p. 40, ed. Walter Scott).—Thomas Prior, *List of Absentees*, 1727 (cited above), and continuations in subsequent years.—Lecky, *History of England in 18th Century*, vol. ii. 2d ed. ch. vii. p. 237 *et seq.*; *Id.*, vol. iv. ch. xvi. p. 317 *et seq.*—Arthur Young, *Tour in Ireland*, 1780, ii. p. 59 (a terrific "general picture" of the evils of absenteeism).—Edward WAKEFIELD, *Account of Ireland*, 1812 (passages referred to in index).—*Westminster Review* 1827. —*John Wiggin's* (a land agent) *Letter to . . . Absentee Landlords*, 1822 (anonymous at first), (recommends absentee landlord to employ a confidential friend to visit the estate occasionally).—Minutes of evidence taken before the select committee of the House of Lords . . . Ireland, *Parliamentary Papers*, 1825, ix.—Minutes of evidence taken before the Select Committee of the House of Commons . . . Ireland, *Parliamentary Papers*, 1825, viii.—*Quarterly Review*, March 1826.—*London Magazine*, April 1826.—*Westminster Review*, January 1829.—De Beaumont, *L'Irlande*, 1829.—Bicheno, *Ireland and its Economy*, 1830, ch. viii.—Select committee on state of the poor in Ireland, *Parliamentary Papers*, 1830, vii.—Debate in the House of Commons, 1833, Hansard, xix. p. 583 (cp. xvi. p. 727).—*Westminster Review*, October 1833.—Von Raumer (a writer quoted with approbation by Mill), *England in 1835*, letter lxii. (very forcible).—*Westminster Review*, October 1835.—G. Cornewall LEWIS, *Disturbances in Ireland*, 1836, p. 451.—P. Thompson, *Exercises*, 1842, I. 52.—Report of the Devon Commission, *Parliamentary Papers*, 1845, xix.-xxii. (Answers referred to under the head of *Estate Management* nearly, but not quite, unanimous that the estates of absentees are badly managed). Digest of the same (ch. xxiv., on estate management).—*Dublin University Magazine*, 1850.—LAVERGNE, *Economie rurale de l'Angleterre*, 1858, pp. 378, 383 (referring to M'CULLOCH's paradox says, "En ce qui concerne l'Irlande la question me paraît tranchée par les faits"). —CAIRNES, *Political Essays*, 1873 (Fragments on Ireland), p. 168.

(*b*) MONTCHRETIEN. *Traicté de l'œkonomie politique*, . . . 1615, edited by T. Funck-Brentano, Paris, 1881, p. 41 (early appearance of absenteeism in France).—*Adam Smith*, bk. v. ch. ii. (Tax on absentees)—A. TOCQUEVILLE (Clerel de), *L'Ancien Régime*, 1857, ch. xii. (Absentéisme de cœur of the small resident proprietors).—H. Taine, *Ancien Régime*, 1876, liv. i. ch. iii. pp. 52-77; and numerous authorities there cited. —H. CAREY, *Lectures on Wages* . . . 1835, p. 46 (criticises Senior's theory).—E. Levasseur, *La Population Française*, 1889, ch. xi. p. 237.—Hadley, *Railway Transportation*, 1886, p. 133 (absentee shareholders), and p. 21).—*Journal des Economistes*, 1885, November and December, summarising the results of the recent Italian Commission.—Brodrick, *English Land and Landlords* (passages referred to in index under heading "Absentee"). Reference in Lavergne, *Economie rurale de la France* (medium properties, as in England, lead to absenteeism less than large properties).]

F. Y. E.

ABSTINENCE. This well-chosen expression of SENIOR'S, to use J. S. MILL'S well-known description, has been unfortunate in giving rise to much controversy. It was intended to refer to that element in profits which might be considered as the "natural" reward of the capitalist for abstaining from immediate consumption. It was thus closely connected with the effective desire of accumulation and the theory of a "minimum rate of profits." It has also been much used in the establishment of economic harmonies in the style of BASTIAT with the view of showing that "natural" economic laws are in fundamental accord with "common-sense" morality. As might have been expected from the ambiguity of the terms "natural" and "common-sense," and from the vagueness of the conception abstinence itself, this economic harmony has been severely criticised in the first place by the

Socialists (*e.g.* LASSALLE in *Schulze-Delitsch*, Karl MARX in *Das Kapital*). It was easy to point out that the virtue of abstinence could in many cases be reduced merely to desire for money as such and to a positive reluctance to spend. This criticism does not, however, seem capable of general extension. More recently another line of criticism has been developed and attention has been drawn to the positive effort required to convert wealth into capital for use in production corresponding in the main to the management or superintendence required after the capital has been formed (compare BAGEHOT, *Economic Studies*, and Schönberg's *Handbuch*, art. "Capital"). (See CAPITAL.) J. S. N.

ABSTRACT OF TITLE. An epitome of the evidence of ownership showing the soundness of one's right to an estate. In the absence of any agreement to the contrary the purchaser of a freehold estate is entitled to have such evidence for a period of forty years, but in the case of advowsons the period is one hundred years. The abstract is sufficient if it shows that the vendor is either himself competent to convey or can otherwise procure to be vested in the purchaser the legal and equitable estates free from incumbrances. [Dart's *Vendors and Purchasers*, London, 1888.] J. E. C. M.

ABSTRACT POLITICAL ECONOMY. Political economy is sometimes described as a wholly abstract science, dealing with an unreal and imaginary subject, that is to say, not with the entire real man as we know him in fact, but with a simpler being who is supposed to be engrossed with one desire only, namely, the desire of wealth. Thus, according to the doctrine laid down by J. S. MILL in his *Unsettled Questions of Political Economy*, the science makes entire abstraction of every human passion and motive, other than the pursuit of wealth, and the perpetually antagonising principles to that pursuit, namely, aversion to labour, and desire of the present enjoyment of costly indulgences. In other words, the economist is described as always working on the hypothesis that the acquisition of wealth is the sole end and aim of human action. In opposition to this view is that of the so-called "realistic" school, some of whom practically deny the utility of any abstract or hypothetical treatment of political economy at all. It is maintained by COMTE and others that any attempt to separate economic science from social philosophy in general must necessarily end in failure. The truth seems to lie between these two extreme doctrines; and it may be pointed out that writers who, like Mill and BAGEHOT, describe political economy as in its complete form a purely abstract science, nevertheless do not treat it as such in their own writings. It is true that they employ an abstract method in many of their reasonings, but it is also true that, taking their doctrines as a whole, they do not hold themselves aloof from the concrete realities of actual life to anything like the extent that their description of the science would lead one to anticipate. They begin with abstractions, but do not end with them; and herein is the true method of the science roughly set forth. We ought accordingly to recognise two stages in economic doctrine, which may be called the abstract and the concrete stage respectively. It may not be possible to draw a hard and fast line between the two, but this does not destroy the value of the distinction. Abstract political economy concerns itself entirely with certain broad general principles, irrespective of particular economic conditions; or, as JEVONS puts it, with "those general laws which are so simple in nature, and so deeply grounded in the constitution of man and the outer world, that they remain the same throughout all those ages which are within our consideration" (*Fortnightly Review*, Nov. 1876, p. 625). It may thus be of universal validity, but this is after all only in virtue of its hypothetical character. It may remain remote from the actual concrete facts. Concrete political economy comes in, therefore, as a supplement. It takes account of special conditions that the pure theory avowedly neglects, and especially concerns itself with the qualifications and limitations, with which the abstract doctrines need to be interpreted. It puts forth no claim to universality, but is content if it can interpret and explain the actual economic phenomena, characteristic of a given period or a given state of society.

[Compare Mill, *Unsettled Questions of Political Economy*, Essay v.;—Bagehot, *Economic Studies*, Essays i. ii.;—Jevons, *The Future of Political Economy*;—*Fortnightly Review*, Nov. 1876;—Keynes, *Scope and Method of Political Economy*, ch. iv., note A.] J. N. K.

ABUNDANCE. In economical, as in popular, discussions, abundance is usually the correlative of scarcity and the synonym of plenty. If there is a distinction plenty is taken to mean a sufficient, and abundance a more than sufficient, provision for wants. Abundance taken absolutely, in the sense of an overflowing plenty, of all and every sort of goods is certainly one ultimate aim of economic effort; and BASTIAT in the cause of free trade has done good service by his assertion and illustration of this axiom. As an overflowing plenty it implies the possibility of leisure; it is a provision secured without cost of labour. Though this is an unrealisable ideal, the economical progress of any society may nevertheless be measured by its approximation to it. In the introduction to the *Wealth of Nations* "the abundance or scantiness of the annual supply of the necessaries and conveniences of life" is made synonymous with wealth and poverty. In ordinary language, however, abundance does not, like wealth or riches, suggest a contrast of more fortunate with

less fortunate men, but rather a relation of the wants of individual men to their means of satisfaction, without any idea of contrast with their neighbours.

Taken in a narrower sense, abundance, not of all and sundry, but of particular classes of goods, is less clearly a benefit than general abundance. To the seller, abundance (which lowers the value of his wares) is an evil. The paradox of QUESNAY and other physiocrats, "Disette et cherté est misère; abondance et cherté est opulence" (*e.g.* Daire's *Physiocrates*, I. 98, cf. 391 ft.), meant, for example, that the agriculturist could only prosper if he had a good market for his crops as well as a large harvest of them. It is bad policy, they said, to create an abundance of necessaries in preference to an abundance of other goods, damaging one class of producers in order to benefit the rest. So it is a fact of common experience that abundance, when confined to one kind of goods, means an "over-production" or "glut" of them. The remedy (as Say pointed out) is not to decrease the abundance of the one kind but to increase the abundance of the others, and so bring the community nearer its ideal of general abundance (see also GLUT; OVER-PRODUCTION; PHYSIOCRATS; J. B. SAY; VALUE; and WEALTH). J. B.

ACCEPTANCE. In relation to contracts generally, the term "acceptance" means the signification of assent by one person to a proposal made by another.

In relation to contracts of sale the term has two significations which must be distinguished. There is an acceptance in performance of the contract when the buyer intimates to the seller that he has accepted the goods, or when he does any act in relation to them inconsistent with the ownership of the seller; but for the purposes of the 17th section of the Statute of Frauds, it is sufficient if he does any act which recognises a pre-existing contract of sale, even though he may not be precluded from afterwards rejecting the goods (see SALE).

In relation to bills of exchange the term primarily means the acceptance by the drawee of a bill of exchange duly written thereon and signed; but as the main object of the drawer of a bill is to get it accepted, the term "acceptance" is frequently used to denote the bill itself, and is then synonymous with "bill of exchange" (see BILL OF EXCHANGE). M. D. C.

ACCEPTILATION (Scots and civil law). Extinction of a debt by discharge granted gratuitously or for trifling payment. A. D.

ACCEPTOR. The person on whom a bill of exchange is drawn, namely, the *drawee*, becomes the *acceptor* by signifying his assent to the document in writing (see BILL OF EXCHANGE). The validity of an acceptance sometimes turns on very intricate points of law.

For details on this, see *The Practice of Banking*, by John Hutchison, especially vols. i. and iii.

ACCESSIO. A term of Roman law used to express the acquisition of property by an addition to former property, due to an accidental circumstance. If, for instance, a plot of land on the bank of a river was increased by the gradual deposit of earth on the bank, the property in the new piece of land was said to be acquired by "accessio." E. S.

ACCESSION, DEED OF. See BANKRUPTCY IN SCOTLAND.

ACCOMMODATION BILL. An accommodation bill may be described as a bill given without receipt of value, in order that the person to whom it is given may raise money and obtain credit by means of it. Ordinarily, the person who lends his name accepts a bill drawn on him by the person he wishes to accommodate, but sometimes a bill is drawn, accepted, and indorsed by different persons, in order to accommodate some person who is not a party to the bill at all. Perhaps the strict legal definition of an accommodation bill would be a bill whereon the principal debtor, according to the terms of the instrument, is in substance a mere surety for some other person, whether that person be a party to the bill or not. When an accommodation bill gets into the hands of a holder for value he may enforce payment of it precisely in the same way as if the bill had been given for value. When, however, an accommodation bill is dishonoured, some special considerations come into play. In the first place a drawer or indorser for whose accommodation the bill was accepted cannot set up as a defence either absence of notice of dishonour or informality in presentment for payment, for he was the party primarily liable to meet the bill. Secondly, if the bill be held by a person who knows the real relationship of the parties, the ordinary rule of the law of principal and surety then attaches, and a discharge of, or binding agreement to give time to, the principal debtor may discharge the surety. For instance, suppose the holder of a bill knows that it was accepted to accommodate the drawer. If it is dishonoured, he may sue either the acceptor or the drawer, or both; but if, for some fresh consideration, he agrees with the drawer not to press him for (say) three months, he thereby discharges the acceptor. So if a joint and several note is made by three persons, two of whom sign to accommodate the third, and the holder accepts a non-statutory composition from such third person, the two co-makers who signed to accommodate him would ordinarily be discharged. M. D. C.

ACCOUNT. On the stock exchange there are settlements, bi-monthly in general securities, and monthly in British consols and India Government sterling stocks. The account begins after one settlement and ends at the date of the

next. Transactions are said to be "for the account," and prices are quoted for the account, to distinguish these transactions from bargains done "for cash," meaning for ready money. Practically, all the speculation that goes on in the stock exchange is done by buying or selling "for the account" (see CARRYING OVER; BACKWARDATION). A. E.

ACCOUNT DUTY. See DEATH DUTIES.

ACCOUNTS, MERCHANTS'. See PRESCRIPTION, SCOTCH.

ACCRETION (Scots law term). Referring back an after-acquired title so as to complete a right originally defective or imperfect. A. D.

ACCRUE. To arise or spring as a natural growth or result. Accrued interest is the interest due for the period which, at a given moment, has elapsed since the last payment of interest, as for the time being it increases the principal debt. The word is not always free from ambiguity; if, for instance, property accruing after a certain date is spoken of, it is not quite clear whether property in which a future interest was acquired before the period named, but which only came into possession afterwards, is included. E. S.

ACCUMULATION. Without entering into the difficulties involved in the definitions of CAPITAL; WEALTH (*q.v.*), and simply assuming that accumulation refers to wealth set aside from present consumption for future uses, the rate of accumulation in any country at any time is held to depend upon two groups of causes: (I.) causes affecting the fund from which savings can be made; (II.) causes which induce people to save rather than to consume their wealth.

Under the *first* group of causes may be enumerated—(1) natural resources, *e.g.* minerals, climate, harbours, rivers, etc.; (2) efficiency of labour and capital, including industrial skill and organisation (see EFFICIENCY OF LABOUR); (3) the amount taken by government for public purposes either directly by taxation or indirectly by exacting services, as in conscription for military purposes. The indirect effects and methods of expending it must always be taken into account (see TAXATION); (4) foreign trade, under which we must take into account the various elements of international indebtedness (see FOREIGN EXCHANGES), *e.g.* earnings for freight and returns on foreign investments; (5) credit, which indirectly and directly saves both labour and capital. Division of labour in the modern sense would hardly be possible without credit, and it is largely owing to credit that saving in the economic sense has taken the place of hoarding (see CREDIT); (6) means of communication, *e.g.* roads, canals, and railways, play an important part in the production of wealth, for the act of production is not complete till the commodity is in the hands of the consumer. To summarise in a sentence, the amount of the fund from which savings can be made depends upon the efficiency of the three great agents of production—natural agents, labour, and capital, as compared with the total expenses of all kinds, both of individuals and governments, which are necessary to preserve what is called the STATIONARY STATE (*q.v.*)

Secondly we must consider the motives which induce people to save rather than to consume this real net produce. The following are held to be the most important factors: (1) security that what is saved will be preserved to or enjoyed by the owner. Even slaves, out of their small *peculium* have been known to save if they were sure of their savings. Security, as MILL points out, must be given not only by the government but against the government (compare Turkey at present or the old Roman provinces). Security of life owing to climatic or other natural causes may also be mentioned; (2) effective desire of accumulation; this consists really of a group of motives. It may be weak from intellectual deficiency, mere want of power to look forward (compare American Indians and Chinese), or from moral deficiency, no interest in others, no sufficient care to avoid pauperism in old age, or to provide for a family, etc.; (3) desire to rise in the social scale—the importance attached to the mere possession of wealth apart from its uses—a point too often overlooked; (4) facilities for investment; this is specially illustrated by the case of labourers and savings facilitated by growth of savings banks, building societies, etc., and by insurance companies for all classes; (5) the difference of the classes among which the national wealth is distributed, as certain classes tend to save more than others (compare France before and after the Revolution, the waste of the aristocracy and the saving of the peasants); (6) the rate of interest, which operates in two ways. If the return is high there is a greater *inducement* to invest, though Adam SMITH, in speaking of the high profits of the monopoly of the colonial trade, thinks it tends to promote extravagance. If the return is low, however, there is need to save more to make a certain provision against old age, sickness, etc.

[The subject of accumulation is treated at length in all the principal text-books. Special attention, however, may be called to the criticism by JONES (*Political Economy*, edited by WHEWELL) of previous writers, and to the practical example in Sir R. Giffen's paper entitled "Recent Accumulation of Capital," *Essays in Finance*, 1878, and by the same author *The Growth of Capital*, 1889 (see CAPITAL).] J. S. N.

ACHENWALL, GOTTFRIED, economist and statistician, born in 1719 at Elbing in West Prussia, died in 1772 at Göttingen, where he was a professor in the university. He was author of *Staatsklugheit nach ihren ersten Grundsätzen*, 1761, a work in which, as ROSCHER remarks, description greatly preponderates over

criticism. He belongs to the same school as JUSTI, namely, that of the moderate mercantilists. It is in the history of statistics more than in connection with economics that he holds a really high place; the Germans indeed sometimes call him the Father of Statistics, strangely ignoring the claims of PETTY and other earlier writers. The work by which he is known in this department is his *Staatsverfassung der heutigen vornehmsten Europäischen Reiche*, 1752. There is prefixed to this treatise an introduction on statistics in general, in which he seeks to determine accurately the province of the study, and to distinguish it clearly from other kindred branches of research. In the body of the work he gives a view of the constitutions of the several states of Europe, and describes the condition of their agriculture, manufactures, and commerce, often supplying numerical details in relation to these subjects. He seems to have been the first to use the German word *Statistik*; the Latin adjective *Statisticus* is found in the title of a book by a German publicist, known as Helenus Politanus (*Microscopium Statisticum, quo status imperii Romano-Germanici repraesentatur*) published in 1672 (Roscher, *Gesch. der Nat. Oek. in Deutschland*, p. 466). J. K. I.

ACKERSDYK, JOHN, born at Bois-le-duc, 20th Oct. 1790, studied law at Utrecht, and graduated there in 1810. He died 1861. First a lawyer, afterwards a judge, he was appointed in 1825 a professor at the University of Liège, and in 1830, after the Belgian revolution, a professor at Utrecht. Here from 1849 till 1860 he taught economics.

During his long and frequent travels Ackersdyk collected a vast mass of information which he availed himself of to enrich his lectures. His writings are not very numerous, being principally short essays in periodicals. The following are specially deserving of notice: *Bedenkingen over de Korenwetten* (Remarks on the Corn Laws), 1835;—*Nederlands financien—Nationale Schuld* (Financial condition of Holland—National debt), 1843;—*Nederlands Muntwezen* (The Dutch Currency), 1845;—*Over Belastingen en Bezuinigingen* (On Taxes and Savings), 1849. A. F. V. L.

ACKNOWLEDGMENT. The formal admission of some fact—*e.g.* acknowledgement of indebtedness. The "acknowledgement of an account" in commercial language is equivalent to the "account stated" of legal language, which is an admission by one party who is in account with another that there is a balance due from him. Such an admission in our law imports a promise to pay upon request. "Acknowledgement of married women" is the technical expression for the particular method which must be adopted whenever a married woman alienates real property which is not included in her separate estate. The deed conveying the property must be *acknowledged* by the woman on being examined by a judge or commissioner apart from her husband. As the sphere of the separate estate has been considerably enlarged by the Married Women's Property Acts, the opportunities for adopting this procedure are less frequent. E. S.

ACLAND, REV. JOHN, born in 1699, was the second son of John Acland, M.P., of Woodly, Yorkshire. He graduated M.A. at Oxford (Exeter Coll.) in 1725, was instituted vicar of Broad Clyst, Devonshire, in 1753, and was led by the failure of friendly society legislation in that county to publish—*A Plan for rendering the Poor independent on Public Contribution founded on the basis of Friendly Societies commonly called Clubs, to which is added a letter from Dr. Price*, Exeter, 1786, 8vo. Acland's proposal was that Parliament should establish throughout England a general club for the poor in sickness, old age, or when out of work; to this every adult wage-earner should contribute as well as the general community (see INSURANCE, Articles on). This plan was criticised in a pamphlet (1788) by the Rev. John HOWLETT (*q.v.*) An abstract of it may be seen in EDEN'S *State of the Poor*, i. 373-380. Acland also wrote *An Answer to a Pamphlet published by E. King, in which he attempts to Prove the Public Utility of the National Debt, and a True Statement of the Real Cause of the present high price of Provisions*, 1796, 8vo (a tractate on the evils of the National Debt). H. R. T.

ACQUITTANCE. (1) Release, discharge. (2) A receipt in full, which bars a further demand. E. S.

ACT OF BANKRUPTCY. For Scotch equivalent (Notour bankruptcy) see BANKRUPTCY IN SCOTLAND. A. D.

ACTOR SEQUITUR FORUM REI. See JURISDICTION.

ACTUARY. The officer of a life insurance company whose duty it is to advise upon all questions relating to their tariffs, rates of premium, and periodical valuations of assets and liabilities, in which the calculations are based upon mathematical science, the laws of probability, and the statistics of death and of survivorship, in combination with all the scientific formulæ connected with interest of money and with commercial finance. In this sense the designation defines a distinct class of professional men, and, as such, it has long been used in the legislative enactments relating to life assurances and annuities, and to friendly societies. In the year 1884 the united members of this profession received a charter of incorporation from the crown, empowering the existing members of two societies theretofore known as the Actuaries Club and the Institute of Actuaries to combine under specified regulations, by the title of that institute, and the present and future members to affix the

denoting letters of F.I.A. to their names. The *Journal of the Institute of Actuaries* is published quarterly, and its twenty-eighth volume has already been reached. The earlier volumes bore the title of *The Assurance Magazine*. Its contents may with confidence be recommended to students, as embracing papers of the highest importance in connection with the doctrine, history, and practice of life assurance, and vital and other statistics bearing thereon and upon annuities, marine and fire insurance. The designation of actuary has also been long applied to certain officers invested with duties, more or less like the above, in savings banks and in government offices such as those of the commissioners for the reduction of the national debt, the war office, etc. It has also been applied in the last two centuries to the clerk to the convocation of clergy, but the name is in this case derived from his being the recording officer of the acts arising out of the deliberations of that ancient body, in the same way that the "actuar," a functionary of the courts of justice in Germany, has to record and to see to the promulgation of their decrees. An account of the designation of *actuaries* in the case of public officers of other kinds in ancient Greece and Rome, may be read in Sir George Cornwall Lewis's *Methods of reasoning in matters of Politics* (see Insurance). F. H.

ACTUS. An expression of Roman law used to indicate the right of an adjoining owner to drive cattle and take carts over his neighbour's land. E. S.

ADAMS, Charles Francis, born in Boston 1807; died 1886; was a lawyer and diplomatist, and during the civil war minister to England. In the period 1835-40 he gave considerable attention to the subject of currency, and differed from the Whig party's position. Adams wrote, in 1837, *Reflections upon the present state of the currency in the United States*, Boston, pp. 34, also *Further reflections upon the state of the currency in the United States*, Boston, pp. 41. He asserted that the financial disturbance of 1837 was due to over-banking, and not to over-trading with foreign countries, and that it would be impossible to secure a uniform currency until it was taken in hand by the national government. Adams was opposed to the sub-treasury system, and favoured a national bank. He must not be confounded with his son, Charles Francis Adams the younger, the well-known writer on the railway question. D. R. D.

ADDISON, Joseph, born 1672, died 1719. Addison's brilliant literary career has drawn away general attention from his official position in the government of his time, and his occupation as one of the lords commissioners of trade (see Board of Trade). His remarks (No. 69 of the *Spectator*) on the importance of the traffic of the merchant in reference to the general prosperity of the country may still be read with interest as embodying those facts on which the principles of free trade rest.

ADEMPTION OF LEGACY occurs where a legacy does not take effect owing to some act on the part of a testator not affecting the validity of the will; (1) Where the testator alienates the subject matter during his lifetime the legacy fails; (2) Where a parent or a person *in loco parentis* gives a legacy to a child, and afterwards advances to such child a portion on marriage, or on preferment in life, if the portion be equal to or greater than the legacy, it operates as a total ademption of such legacy; if of lesser amount it adeems the legacy *pro tanto*.

[See Williams on *Executors*, 1879, pp. 1327-1345.] J. E. C. M.

ADJUSTMENT, Average. A Rhodian law provided that if, in order to save a vessel, a portion of the cargo was thrown overboard, the owners of the rest of the cargo should contribute to the loss. This principle has been followed by modern nations, and in the English law it has been expressed in the following terms:—"All loss which arises in consequence of extraordinary sacrifices made or expenses incurred for the preservation of the ship and cargo comes within general average, and must be borne proportionally by all who are interested" (Lowndes on *General Average*, 4th ed., London, 1888, p. 21). The calculation of the losses incurred and the adjustment of the amount to be contributed by the ship, the cargo, and the freight respectively, is effected by a class of arbitrators called "average adjusters," whose duty it is to give their decision in accordance with legal principles. In computing the amount to be made good the following are the chief rules. (1) Disbursements are estimated at the amount expended *plus* the costs of raising funds. (2) Cargo sacrificed is valued at such a sum as would place the owner in the same position at the time and place of adjustment as if not his goods but those of some other person had been sacrificed. (3) Ship's materials sacrificed are valued at the cost of repair, less a deduction of one-third in respect of the advantage derived by the owner from the fresh repairs.

To the amount of loss so ascertained contribution has to be made (1) by the ship in proportion to its actual value to the owner at the time of adjustment; (2) by the cargo in proportion to its net market value at the date of delivery or at the time and place of adjustment, deducting the expenses the merchant incurs in case of delivery; (3) by the freight less the expense of earning it which would have been saved had the ship been lost (see Average, Maritime).

[*The Law of General Average, English and Foreign*, by Richard Lowndes, 4th ed., London, 1888.] J. E. C. M.

ADMINISTRATION. The term administration is not easy to define. It is oftenest used to describe the executive business of the state. The functions of the state are usually classified as legislative, judicial, and executive, and this classification, while open to many objections, is as good as any other that has been suggested. If we adopt it and take administration as equivalent to the executive function, administration will practically comprehend all the activities of the state with two important exceptions, the function of making laws—the legislative function—and the function of interpreting laws—the judicial function. Administration in this sense includes an immense number of subordinate functions, which demand separate treatment. In a general view of administration it is only necessary to discuss the following topics: (I) The sphere of administration as defined (*a*) by theoretical writers, (*b*) in concrete historical instances. (II) The organisation of administration. (III) The relation of the administrative organisation to (*a*) the sovereign person or body of persons, (*b*) the individual citizen. (IV) The economic aspects of administration.

I. *Sphere of Administration* (*a*) as defined by theoretical writers. The innumerable theories on this subject may be reduced to three types, the *laissez-faire* type, the *socialist* type, and the *empirical* type. The LAISSEZ-FAIRE theory may be stated thus: Individual liberty is the one indispensable condition of goodness and happiness. Constraint is put upon the individual by any and every action of the state. The action of the state is therefore an evil to be reduced within the narrowest limits. The state, therefore, should undertake only those functions which cannot possibly be discharged by private persons, singly or associated. Therefore administration should be restricted to protecting the individual from interference, either by lawbreakers at home or by enemies from abroad. The only useful departments of administration are the army, navy, and police. The *socialist* theory may be stated thus—The co-operation of all for the good of all is the one indispensable condition of goodness and happiness. This co-operation can be effected by the state and by the state alone. The action of the state is therefore a blessing to be extended as much as possible. Every human being should be an official either in training, on service, or pensioned off. Administration should be co-extensive with social life, and there should be as many administrative departments as there are branches of industry.

The *empirical* theory may be stated thus—Individual liberty and compulsory co-operation are not ends in themselves, but only means to human well-being. Some wants of society can be provided for only by individuals, other wants only by the state; but there are many other wants of society respecting the satisfaction of which no general rule can be laid down. Experience must in each case decide what the state should and what it should not attempt. Different maxims will apply to different cases. What should be done by administration in any country will depend on the circumstances of that country. This theory being elastic, its professors differ greatly among themselves, some inclining to *laissez-faire* and some to socialism.

(*b*) The sphere of administration, as seen in concrete historical instances, has varied widely, although it has never corresponded to the requirements of extreme socialism or extreme *laissez-faire*. So long as society remains a collection of self-governing families, the sphere of administration, like that of legislation, is restricted. So long as population continues sparse, wealth restricted, and wants few, there is little work for administration. There is hardly a circumstance in the condition of a people which does not contribute to determine the sphere of administrative action.

II. *The Organisation of Administration.*—Administrative organisation takes innumerable forms. But the character of an administrative system depends mainly on the question whether it is carried on by paid officials (in which case it is popularly called a bureaucracy), or whether it is carried on by unpaid citizens (in which case it is popularly called self-government). With this distinction is connected the distinction between a centralised and a localised administration. A centralised administration must, necessarily, be conducted by paid officials, since private persons cannot regularly travel long distances to take part in administrative work, most of which lies outside their knowledge or interest. A localised administration might be wholly conducted by paid officials of the local authority. But in practice it is usually in great measure conducted by private persons, who make up for the want of professional skill by the knowledge of their own wants, and give their unpaid service because they obtain an indirect return in power, consideration, and the satisfaction of managing their own affairs.

BUREAUCRACY and self-government must not, however, be regarded as mutually exclusive systems of administration. In all civilised states they supplement one another, although their relative importance is hardly ever in two instances the same. It is a mistake to suppose that there is no self-government in Prussia, in France, or even in Russia. It is a mistake to suppose that bureaucracy does not play a great part in England. In fact the administration of a civilised state is so serious a task as to demand all the power of bureaucracy and self-government combined. The paid official has,

or should have, the advantage in professional knowledge, professional skill, professional discipline, whilst the unpaid citizen has, or should have, the advantage in familiarity with local requirements, in local patriotism, and in freedom from technical prejudice and routine. An ideal system would make the unpaid citizen do as much work for the public as could be got out of him, and ensure his doing it properly by providing official information, supervision, and audit. A certain independence is necessary to make unpaid work attractive to able and honest men. On the other hand some duties can never be efficiently discharged by unpaid officers because they need a special training and a special skill.

Administrative organisation admits of innumerable variations in detail. A certain similarity may nevertheless be noted in the administrative systems of states which are similar in extent and civilisation. In very small states the administrative system must necessarily have rather a municipal than an imperial character. Thus in the states of ancient Greece and of ancient and mediæval Italy, we find administrative organisations suited to the wants of a single town (see CITY—ANCIENT, MEDIÆVAL). When the state expanded beyond these dimensions a municipal had to be transformed into an imperial administration. The most striking instance of this process is afforded by the history of Rome. But in very large states the imperial and the municipal organisations are distinct from the first. The central administration is from the first contrasted with the local administration. Both, however, are servants and representatives of the state. Both exist in order to carry out its laws. Their separation is due to the necessities of public business. It is qualified by the superior power of the central as compared with that of the local authority, and of the sovereign as compared with both. Yet it is so important that each must be considered by itself.

Central Administration in modern Europe has had its root in the power of the monarch and has grown with the growth of that power. Thus in France the development of the central administration is almost co-extensive with the political history of the nation. In England, before the Conquest, there was hardly anything which could be called a central administration, although the local administration was tolerably complete. After the Conquest the nucleus of a strong administration was created by the Norman kings, who had to maintain their authority at once against a recently conquered people and a lawless feudal nobility. By the DOMESDAY survey the central government was, for the first time, informed of the population and resources of the kingdom. The taxes were much augmented and the exchequer was organised for the business of collection and management. The circuits of the itinerant justices, at first designed as much for financial as for judicial business, began under Henry I. and were systematised by Henry II. By means of these circuits the central administrative authority was placed in direct contact with the local administrative authorities. Great works of architecture were executed at the royal expense. Mercenary armies were frequently employed. But the administration as yet concerned itself with a few comparatively simple matters. It was still indissolubly blended with the economy of the king's household. Throughout the Middle Ages public health, public communications, and police in so far as provided for, were in the hands of the local authorities. The local authorities enforced the many regulations respecting agriculture, manufactures, and trade, which were enacted either by themselves or by parliament. EDUCATION and the RELIEF of the poor were for the most part left to the care of the church. From the accession of the house of Tudor down to our own time the strength and activity of the central administration have constantly grown, but so gradually and irregularly that a summary account of the change is almost impossible. The following are the chief points which call for attention. During the 16th century the central administration is in the hands of the monarch and his privy council, whose power is seen rather in particular arbitrary acts than in a minute official interference with ordinary life. By the political revolution of the 17th century a prime minister depending on the House of Commons and a cabinet are substituted for the king and privy council as heads of the administration. The distinction between the CIVIL LIST (*q.v.*) and the rest of the public expenditure prepares the way for the ultimate total separation between the royal household and the central administration. At the same time the establishment, first of a regular navy, then of a regular army, and the growth of commerce and of colonies, involved the creation of new administrative departments. But every addition was made piecemeal, so that the central administration in the 18th century presented a scene of extraordinary confusion. In the 19th century, especially since the passing of the Reform Act of 1832, the central administration was almost completely transformed. At the accession of William IV. the civil list was so arranged as to complete the separation between the personal income of the monarch and the other public charges. The POOR LAW Amendment Act of 1834 established the poor law board, since developed into the local government board, and later into the ministry of health, a body which supervises and controls the great majority of local authorities. This ministry also enforces the modern legislation on public health, beginning with the Public Health Act of 1875, which consolidated earlier statutes. The Committee

of Council for Education, established in 1893, became in virtue of the Education Act of 1870 an education department which has since been expanded into the Ministry of Education. The military and naval departments have undergone, and are still undergoing, various modifications.

Local Administration.—The character of a system of local administration depends chiefly upon (*a*) the mode in which the country is distributed into administrative areas; (*b*) the constitution of the administrative authorities; (*c*) the functions entrusted to them; and (*d*) their relation to the central administrative authority. (*a*) In modern states it has generally been found advisable to divide the territory into at least three species of administrative areas, the smallest being the TOWNSHIP, PARISH, or COMMUNE, the intermediate being the hundred or UNION or arrondissement, and the largest, the COUNTY, province, or DEPARTMENT. The whole territory is thus divided into three systems of areas. But certain parts of the territory, especially towns and cities, differ so much from the rest in requirements and resources that they are usually constituted into special administrative areas. The space covered by these areas may or may not be withdrawn from the general subdivision. Thus many of the larger English cities and towns possess all the attributes of counties, but they are distributed into parishes.

Again, the larger areas may be formed by grouping the smaller areas, or they may have no reference to them. Thus in England the union area has always been made up by grouping a number of poor-law parishes; but these parishes may be in more than one county, so that the boundaries of the union often intersect those of the county. Again, the union area and the area of a municipal borough may coincide, but generally they have been traced without reference to each other, and a municipal area may contain fragments of two or three poor-law areas. Besides these, many other administrative areas have been created at different times and have not been harmonised with one another. This confusion of areas is, however, almost confined to England, and is being gradually mitigated. In England and elsewhere different methods of division have prevailed in different periods. The county has always remained the largest administrative area; but the HUNDRED has almost disappeared, whilst the POOR LAW union is quite modern; and in the lowest range the township has in many instances been succeeded by the MANOR, and this again by the parish, civil or ecclesiastical.

(*b*) The constitution of the local authority in each area admits of much variety, but is generally reducible to one of four types; an assembly of all householders in the area, an assembly of elected representatives, a comparatively small ruling body recruited either by co-optation or by the selection of the supreme government, and a staff of officials paid by, and immediately controlled by, that government. Thus the Anglo-Saxon township and the township of New England had as their authority the assembly of householders, and the same type of authority appears modified by feudal influence in the courts of the mediæval manor, and modified by ecclesiastical influence in the general vestry of the modern parish. Something similar is seen in the village council of eastern Europe and of Asia. But this type of authority is suitable only to the smallest area. The second type of authority, the elective assembly, is seen in the English select vestry, board of guardians, and modern municipal and county councils, and generally in the urban communities of the civilised world. Unlike the popular assembly, it is compatible with an extensive area and with multifarious administrative duties, and as it harmonises with democratic sentiment, it is coming into more general employment. The third type of authority, the exclusive body, was seen in many English municipal corporations before the act of 1835, and in the English county authorities before the act of 1888. Some of the municipal bodies of this class renewed themselves by co-optation. The Quarter Sessions were recruited by the appointment of the crown from a list presented by the lord-lieutenant, and composed of persons having a certain property qualification. The fourth type of authority, the staff of government officials, is almost unknown in England and is not common anywhere. But in many countries the head of the administrative body, and the possessor of all real administrative power, the prefect or mayor, is a government official, and his elective colleagues exist chiefly in order to disguise the fact that there is no real self-government.

(*c*) As regards the functions of the local authority, these have undergone many changes. In England they originally comprised, besides certain legislative and judicial duties, the duty of maintaining a police, the duty of keeping up public communications, the duty of taking certain precautions for the public health by removal of nuisances, etc., and the duty of enforcing a multitude of regulations as to weights and measures, the quality of goods offered for sale, especially provisions, and other matters connected with manufactures and commerce. A series of statutes culminating in the poor law of Elizabeth passed in 1601 added the function of relieving the poor, formerly left to ecclesiastical or to private charity. The duty of providing for the public health, which had been little more than nominal, has become in our time a great branch of local administration. The duty of providing for elementary education is still more recent. Besides these functions local authorities have acquired, under a number of general or special acts, power to

provide almost everything which can minister to the health, decency, comfort, or amusement of a dense population—gas and water works, markets, museums, galleries of art, libraries, parks, gardens, baths, lodging-houses, and burial grounds.

(*d*) Relation to the central authority. This relation differs widely not only in different states but in the same state at different times, or with respect to different classes of local authority. Thus in England the control of the central authority has usually been less strict than in France. In England there was hardly any effective control of local administrative bodies by a central authority, until the Poor Law Amendment Act of 1834. The poor law board first, and then the authorities that have succeeded it, have exercised over the union authorities a pretty complete control. It has been said that the only question with respect to which a board of guardians has any real discretion is that of granting or refusing applications for relief. The municipal corporations on the other hand, especially those of the largest boroughs, have retained a real independence.

The central administrative authority may influence the local administration in one or more of the following ways: (*a*) By collecting, preserving, and circulating statistical and other information useful for administrative purposes; (*b*) by enacting rules to guide the local authority; (*c*) by periodical inspection or constant supervision to ensure the observance of these rules; (*d*) by periodical audit of the accounts of the local authority. The means of enforcing this control are various. The extreme penalty for disobedience is the dissolution of the offending local authority. In England a board of guardians may be dissolved by order of the ministry of health, but a municipal corporation cannot be dissolved by any merely administrative authority. A lighter penalty is the withholding either altogether or in part of grants of money, ordinarily made by the central to the local authority. Thus a local education authority in England obtains the government grant only in so far as the education given by it satisfies the ministry of education.

III. *Relation of the Administrative Organisation* to (*a*) the sovereign person or body of persons; (*b*) the individual citizen. The sovereign in each state will necessarily control the administration, but this will be effected in different ways. Under the older form of constitutional monarchy the monarch made laws by the advice of his parliament and carried on the administration by the help of his council. The ministers were his ministers, and through them he controlled every branch of the administration. At the same time he depended on his parliament for the necessary funds, and his ministers were liable to parliamentary impeachment. Under the later form of constitutional monarchy, the prime minister takes the place of the king and the cabinet takes the place of the privy council. The prime minister and cabinet owe their power to the support of the majority in the more popular house of the legislature. Thus that house which is virtually sovereign has a direct control over the administration. Most modern republics are organised on the model of constitutional monarchy. In the United States the president is perhaps more influential in the administration than was formerly the king of England. The ministers are his ministers and do not even sit in congress. In France the president takes the place of a modern king of England, the prime minister is the real ruler of the state, and he and his cabinet hold office at the pleasure of the majority in the chamber of deputies. In despotic monarchies the monarch has sole control of the administration, unchecked either by a power of withholding supplies or by a power of impeachment residing in a representative body.

The relation of the administrative system to the individual citizen differs in different countries according to the nature of the authority empowered to decide upon their respective rights and duties. In many despotic states of a rude type administrative and judicial functions are united in the hands of the monarch and the provincial governors. Under this system there can be little protection for the individual citizen. In the despotic states of civilised Europe the administrative and judicial organisations were usually kept distinct, but acts done in the course of administration were placed under a special law administered by special tribunals, and in many cases action could not be taken before these tribunals without the previous sanction of the government. In France this system survived many revolutions and has but recently been modified. It is also found more or less developed in many other continental states. In England a special administrative law and special administrative tribunals are unknown. Every branch of the public service has its own regulations and discipline, but these affect only its members. Every administrative authority stands in the position of a private person empowered by law to discharge certain special functions. Acts done in the course of administration are on the footing of all other acts. If a policeman uses excessive violence in taking a prisoner to the police station, or if a collector of taxes exceeds his lawful powers, redress is afforded by the ordinary courts of justice applying the same laws and observing the same procedure as in any other case of assault or of extortion. So too the rights and duties of any government department or local authority are determined like those of any private individual.

IV. *Economic Aspects of Administration.*—These are numerous and complicated. In the first place administration includes the business

of raising the public REVENUE. It thus includes the whole of public finance. In this light the questions as to the safe limits of TAXATION, as to the best kinds of taxes, as to the most economical methods of levying them, as to the least harmful ways of raising and the least oppressive modes of liquidating public loans, are all administrative questions, although they are so extensive that they cannot be treated in this article. In the second place administration includes the business of spending the public revenue. That business suggests the inquiry as to the proper functions of the state. What should the state attempt to do itself? what should it attempt to regulate? what should it leave entirely out of view? These questions raise other than economical issues; but they raise economical issues too. Thus experience shows that in countries where capital and knowledge are rare many of the requisites of production such as RAILWAYS, CANALS, aqueducts, DOCKS, drainage, and irrigation works, can be provided only by administrative effort. By providing these the state does not lessen individual energy or narrow its field of action. On the contrary, by facilitating production these administrative undertakings have often strengthened the spirit of individual enterprise and accumulation. A notable illustration of the service which may thus be rendered by an efficient administration is seen in the growing prosperity of British India. In a later stage of economic development more can be done by private effort and less needs to be done by administration. But the growing complexity of life and industry, the gathering of multitudes into large cities, the concentration of industries in huge factories, the production of the necessaries of life, not by domestic labour, but by scientific processes on a vast scale, the new combinations of labour and of capital, the increased attention given to health, the more exacting demand for enjoyment and education, the dissolution of old customs and beliefs, all these changes bring with them difficulties which compel interference here and interference there and a vast process of administrative regulation. No general rule can be laid down respecting the effect of such regulation; the effect can be known in each case only by experience. All that can be said is that before regulating any branch of industry the fullest information possible should be procured, and that all new regulation should be tentative. In the third place we have to consider the economic effect of efficiency or inefficiency in administration irrespective of its objects. The industry, the integrity, and the intelligence of the administration are great economic forces. Compare the administrative staff in Turkey with the administrative staff in Prussia and consider their influence on the economic condition of their respective countries. If the administrator is an official, his efficiency will depend greatly upon the spirit, education, and traditions of the service of which he is a member; if he is a private citizen, his efficiency will depend greatly upon the spirit, education, and traditions of the class from which he comes. In the fourth place the magnitude of the administrative staff is a circumstance of economic importance. An overgrown civil service means a great number of idlers and a waste of productive power, especially power of mind. It also means a heavier taxation of the productive classes (see BUREAUCRACY; CIVIL LIST; GOVERNMENT).

[For a general view of the modern state and its organs, see Bluntschli, *Theory of the State*; for the history of the English administrative system consult Stubbs's and Gneist's *Constitutional Histories of England*, and for more detailed information the works enumerated in any bibliography of English history. For its present state consult Anson, *Law and Custom of the Constitution*, 5th ed., 1923. The volumes known as the English Citizen Series are still useful, but unfortunately have not been brought up to date and must be used with caution. The ultimate authorities on the subject are to be found in the statutes and departmental regulations dealing with the subject.

F. C. M.

ADMINISTRATION, LETTERS OF. Until the year 1922, when a person died intestate, his real estate passed immediately to his heir, *i.e.* to the person designated by law as entitled to its enjoyment, while his personal estate passed to his administrator, who had to administer it for the benefit of (1) his creditors (2) of the next of kin entitled to enjoy the surplus after payment of his debts. But now by the Law of Property Act, 1922 (12 & 13 Geo. V. c. 16), both real and personal estate in such cases pass to the administrator to be administered for the same purposes. The administrator is a person who takes out letters of administration, *i.e.* procures himself to be nominated by the Probate Division of the High Court to the administration of the estate. Letters of administration are granted usually to some of the next of kin; failing them, to a creditor, and, if there be no creditor, to any person whom the Court thinks suitable. Once appointed, the administrator very closely resembles an executor appointed by will. Like the executor the administrator, as such, has no beneficial interest in the estate, and no liability for anything beyond the assets which he receives. He is bound to realise the estate, to pay the funeral expenses and debts, and to distribute the balance, if any, among the persons entitled under the Law of Property Act, which repeals the old Statutes of DISTRIBUTION (22 & 23 Car. II. c. 10, and acts explaining or amending). He may himself happen to be one of these persons.

It may happen that although the deceased has made a will he has named no EXECUTOR, or that the executor named refuses to act, or be-

comes incapable, or dies before the testator. In any of these cases an administrator must be appointed, and his administration is said to be "cum testamento annexo," since it his duty to give effect to the provisions of the will. Should the sole executor or the administrator be an infant, his guardian will obtain letters of administration "durante minori aetate," that is, until the infant attains his majority.

Should the administrator die before he has fully administered the estate, a new administrator must be appointed. For the office of administrator does not pass like the office of executor to the personal representatives of the person who held it.

[See Underhill, *Law of Property Act.*] F. C. M.

ADMINISTRATOR. The personal representative of a deceased intestate or of a testator whose will does not appoint any executors, or whose executors are unable or unwilling to act. The nearest relative who is willing to act is appointed administrator, and in default of relatives administration may be granted to a creditor. The instrument certifying the grant is called "letters of administration." The personal estate of the intestate or testator (and since 1882 such real estate as was held by him in a fiduciary capacity) becomes vested in the administrator, who has to pay all debts chargeable to the estate, and to distribute the residue according to law, viz. in case of intestacy in accordance with the Law of Property Act, 1922 (12 & 13 Geo. V. c. 16, repealing 22 & 23 Car. II. c. 10; 1 Jac. II. c. 17), and, where there is a valid will in accordance with the directions contained in the same. In the latter case the grant is made "with the will annexed" (*cum testamento annexo*). E. S.

ADULTERATION. The alteration of an article into something inferior, but not readily distinguishable in appearance, by the addition of cheaper materials. Legislation has endeavoured to provide, in many instances, but not always successfully, that the articles thus deteriorated should be marked out so distinctly that the unwary may be always able to escape the pitfall. Against this endeavour the maxims of CAVEAT EMPTOR and, with less ground, of LAISSEZ FAIRE, are sometimes invoked. Occasionally even the spirit of class opposition (as when legislation against adulteration is promoted by producers whose interests are individually affected) is called up to hinder the prevention of the sale of something which, though confessedly not what it professes to be, is claimed to be a cheaper and as useful an article as that for which it is substituted. Professor Marshall observed (*Inaugural Address*, Co-operative Congress, Ipswich, 1889), in speaking of adulteration, "That term is often used so as to include open and undisguised changes in the character of goods to suit the wants and the tastes of consumers. But you seem to me to have a clear duty: it is to explain to consumers what things are cheap and what things only appear to be cheap; to give them for their money as high class goods as you can afford, and as much truthful information about them as you possess."

AD VALOREM DUTY. A duty levied on a commodity in proportion to the value, in contrast to a specific charge on the quantity. At first sight this form of taxation appears the more equitable one. In practice, however, customs duties *ad valorem* have been found to work out with great inequality, and also to be inconvenient to levy for various reasons, among which are the following: (1) the difficulty of ascertaining correctly the values of the goods charged with the duty; (2) the opening to fraud; (3) the delay and hindrances caused to importers and others. In theory it might be supposed that *ad valorem* taxes on all commodities would not affect their relative values, but it has been maintained that, owing to the different proportions in which fixed and circulating capitals enter into their cost of production, this would not be so. Thus J. S. MILL remarks (*Principles of Pol. Econ.* bk. v. ch. iv. § 1) that in case of an *ad valorem* duty on all commodities exactly in proportion to their value there would be a disturbance of values owing to . . . "the different durability of the capital employed in different occupations." An *ad valorem* duty was levied at an early date in this country. There existed *temp.* Edward I. an *ad valorem* duty of 3d. upon every *librate* or twenty solidi of lead and tin (*Customs Revenue of England*, Hubert Hall, vol. i. p. 66). In recent years *ad valorem* duties, which had practically disappeared from the British fiscal system, have been re-introduced chiefly in connection with Imperial preference. (See TAXATION.)

COURNOT arrives by mathematical reasoning at the conclusion that the effect of an *ad valorem* tax of so much per cent will be the increase of the expenses of production (including transmission into the consumer's hands) by a larger percentage. Let n be that fraction of the value which constitutes the tax. Then the effect is as if the expenses of production had been increased in the ratio $1 - n : 1$. Whence it follows that, other things being equal, a tax will be heavier as the expense of production is greater, that is "as in the price of the commodity a smaller part represents the profit" of the seller. The theorem is true both in a *régime* of monopoly and of competition.

[See James Mill, *Elements of Pol. Econ.*—J. S. Mill, *Principles of Pol. Econ.*—J. R. M'Culloch, *Principles of Pol. Econ., Taxation and the Funding System*, p. ii. ch. iii.—S. Buxton, *Finance and Politics, an Historical Study*, 1786-1885.—Paul Leroy-Beaulieu, *Traité de la Science des Finances*, vol. i. ed. 1877, p. 566.—*Dictionnaire des Finances*, 1889, vol. i., "Droits ad valorem."

Recherches sur les principes Mathématiques de la Theorie des Richesses, arts. 41 and 53. The passages referred to contain some other abstract theorems relating to an *ad valorem* tax.]

ADVANCES. In the writings of the French PHYSIOCRATS (and even of Cantillon, *Essai*, 1755, p. 299) "advances" are an outlay of wealth with a view to some future return, as opposed to an outlay for immediate consumption. This notion was wide enough to include the advances of food made by a parent to his infant child (DAIRE, *Physiocrates*, ed. 1846, p. 391), and might include the means of preparing a feast or making a toy. But more commonly the word was used almost as we now use "capital." "The weapons made by the first hunter were a great augmentation of his capital *or* his advances" (Daire, *ib.*) The physiocrats distinguished three sorts of advances in agriculture:—(1) The ground expenses or *avances foncières* which are laid out once for all, *e.g.* on clearing, draining, etc.; (2) The original advances or *avances primitives*, needing *occasional* repair or renewal, *e.g.* on ploughs, carts, oxen, and manure; (3) the annual expenses, or *dépenses annuelles*, which need regular and continual renewal, *e.g.* wages of labourers and food of cattle (Daire, *ib.*, p. 344). TURGOT applies similar distinctions even to manufacture (*Form. et Distrib. des Rich.* § 52 *seq.*) The distinction drawn by Adam SMITH between fixed and circulating capital rests not on this difference of durability but on the retention or non-retention of the capital in the hands of the investor. RICARDO adopts the criterion of durability while preserving the twofold instead of the physiocratic threefold division. Later economists have followed Ricardo, though most of them admit with him that such a distinction, being one of mere degree, cannot be closely pressed. The "advances necessary to produce a commodity" are sometimes described as synonymous with the capital necessary to produce it (*e.g.* MALTHUS, *Pol. Econ.*, 1st ed., p. 293); and sometimes we hear of the "advance of capital" (Senior, *Pol. Econ.*, p. 194); but it is specially in relation to wages and the wages fund that the word "advances" has been most frequently employed (see CAPITAL; W. N. SENIOR; WAGES FUND). The financial sense of the word (*e.g.* advances to government by the bank) calls for no special consideration. J. B.

ADVENTURERS, MERCHANTS. English companies for the conduct and extension of foreign commerce have been of two different kinds—(1) Regulated, and (2) Joint-stock companies. "When they do not trade upon a joint stock," says Adam SMITH (bk. v. ch. i.), "but are obliged to admit any person, properly qualified, upon paying a certain fine and agreeing to submit to the regulations of the company, each member trading upon his own stock and at his own risk, they are called regulated companies. When they trade upon a joint stock, each member sharing in the common profit and loss in proportion to his share in the stock, they are called joint-stock companies." The oldest and most celebrated of the former class was the company of Merchants Adventurers. To understand its history, we must advert to the system of the STAPLE, established *temp.* Henry III. Certain places on the continent were fixed by royal authority as the sole marts for English wares, where goods were to be "collected, tried, and assessed." During the 13th and 14th centuries the five great exports of England were wool, woolfells, leather, tin, and lead, the first by far the most important. Bruges in Flanders was most commonly the seat of the Staple, but the English kings frequently transferred it to other continental towns, as, for example, to Bergen, Dort, and Calais, usually for political rather than commercial reasons. When the English cloth manufacture began to assume importance, the company of Merchants Adventurers came into existence, and from the first it was most closely, though not exclusively, associated with the export of cloth. Wheeler, secretary of the company, says of it (*Treatise of Commerce*, 1601): "It consisteth of a great number of wealthy and well experimented merchants, dwelling in diverse great cities, maritime towns, and other parts of the realm, to wit, London, York, Norwich, Exeter, Ipswich, Newcastle, Hull, etc. These men, of old time, linked and bound themselves together in company for the exercise of merchandise and seafare, trading in cloth, kersie, and all other, as well English as foreign, commodities vendible abroad." The origin of the company is obscure, and the date of its incorporation cannot be determined with certainty. But privileges were granted to it in the 14th century by the Count of Flanders for trading in his dominions, and Edward III. fixed Bruges as the place to which its commodities should be carried. In 1407 Henry IV. gave its members the right of appointing their own governor. About the middle of the 15th century they came into conflict with the Merchants of the Staple. The latter alleged that the Merchants Adventurers had no right to exact the regular contribution to their society from all persons exporting cloth to the Low Countries. The quarrel came to a head *temp.* Henry VII., who favoured the claims of the Merchants Adventurers, because they had given him valuable help during his diplomatic differences with Margaret of Burgundy arising out of the assistance she gave to Perkin Warbeck. They had prevented distress and discontent among the artisans by "taking up the commodities of the kingdom, though they lay dead upon their hands for want of vent" (Bacon, *Hist. of Henry VII.*) The amount which the company could exact for membership was limited by act of parliament, but its right to control

the cloth-trade to the Netherlands was recognised. It received, in 1501, a charter authorising its members to elect a president and twenty-four assessors, to make their own decrees for the management of the trade, and to punish transgressors. The Star Chamber, in 1505, decided that the merchants of either of the contending companies who wished to share in the trade of the other must pay the ordinary contribution. From this time the extension of English commerce was principally the work of the Merchants Adventurers. Henry VII. had obtained from the government of the Netherlands in 1496 a treaty known as the INTERCURSUS MAGNUS, which secured mutual freedom of trade; the merchants of both countries were allowed proper houses for residence and for the storing of their merchandise. The English traders were also permitted (1499) to sell their woollen cloths in other towns of the Netherlands besides Bruges and Antwerp. The further right to sell by retail was afterwards obtained by pressure exercised on the Archduke Philip, when driven by a storm on the coast of England in 1506; but this concession was strongly protested against by the Flemings, who called the agreement the INTERCURSUS MALUS, and it was before long revoked. Antwerp had drawn away from Bruges the greater part of the English trade by offering special advantages, and though the return of the Merchants Adventurers to Bruges had been agitated from time to time, it now soon ceased to be thought of, and Antwerp became the great market for English cloth. About the same time (1516), the King of Portugal removed to Antwerp the staple for oriental wares, and the Portuguese merchants thenceforth purchased there the English cloth which they sold in the eastern countries and in Brazil.

The second great struggle of the Merchants Adventurers was with the Hanseatic traders in England. In the 14th century the HANSEATIC LEAGUE (*q.v.*) had been a great power, but towards the end of the 15th it began to decline. It had established itself (*temp.* Henry III.) strongly in England. Its merchants assisted the English kings financially and were therefore favoured. Having first settled in some of the towns on the east coast, they finally concentrated themselves in the STEELYARD at London, where they had an establishment imposing by its magnitude and strong defences. A rigorous discipline was maintained amongst the EASTERLINGS, as they were called, the jealous hostility of the city population requiring them to be perpetually on their guard. The Merchants Adventurers, when they had successfully asserted their claims against their English rivals, were eager to get into their hands the whole export trade, at least that in woollen cloth. They were jealous of the comparative immunity from customs enjoyed by the cloths exported through the Hanse traders. The treaty of Utrecht, 1474, had provided that Englishmen should possess the same privileges in Hanseatic towns abroad as the Germans did in England. But the English merchants complained that this reciprocity was not accorded to them. Efforts were made in consequence by Henry VII. to obtain such compacts with Denmark, and such a footing in Livonia, as would to some extent make English traders independent of the Hanse. But political motives led the king to recede from the attitude thus taken up, and to confirm to the Hanseatic traders the privileges they enjoyed in London. Henry VIII. also, unwilling to provoke the enmity of the League, continued to protect the rights of the "Merchants of the Steelyard."

Meantime the Merchants Adventurers had been pushing with great energy their trade with the Low Countries. Wolsey, dissatisfied with the treatment of English traders in the Netherlands, sought to remove the staple for cloth to Calais, and Thomas Cromwell wished to establish it in England. But both these projects failed. The latter proposal was revived in the reign of Elizabeth, and was strongly advocated by Cecil; but the Merchants Adventurers preferred to continue trading to Antwerp, probably because the new arrangement would have necessitated the granting to foreigners in England an equality with the native traders. The Duke of Alva, when sent to the Netherlands by Philip II., seized the property of the English merchants at Antwerp, and they in consequence withdrew in 1578 to Hamburg, where special inducements were offered them. Antwerp, as a commercial centre, was ruined by the civil war; many of the Netherland merchants also removed to England, and a great number of artisans did the same, thus introducing branches of the cloth manufacture which had not previously been practised there. Already in 1552 the English merchants had obtained from the Privy Council a decree abolishing the privileges of the Steelyard, and reducing the Hanse traders in England to the position of other foreigners. Their privileges were, however, partially restored under Mary, and in the early part of Elizabeth's reign; but, failing to recover their old position, they procured the expulsion from Hamburg of the English merchants who had been invited thither. After various measures of retaliation on both sides, the English were, in 1597, expelled from all the dominions of the Empire. Elizabeth forthwith directed the civic authorities of London to close the Steelyard, and ordered the German merchants to leave England, thus bringing to an end the history of the Hanseatic league in this country.

After this period, we find the "foreign residence or comptoir" of the Merchants Adventurers fixed successively at Groningen, Delft, and Dort. In 1649 they are invited to return to Bruges, but decline to do so. They are then

finally established at Hamburg, and come to be commonly known as the Hamburg Company.

The general model of the Merchants Adventurers' Association was followed in the regulated companies which are the great feature of English commerce from the middle of the 16th century. To encourage the trade with Russia opened by Chancellor, Queen Mary incorporated the MUSCOVY Company, and English factors settled at Novgorod; the charter of the company gave it the exclusive right of trading to Russia. The EASTLAND or Baltic Company was incorporated 1579, the TURKEY Company 1581, the Mauritania Company 1585, and the Guinea Company 1588. (See COMPANIES, STAPLE.)

Mercantile companies, with special powers entrusted to them by the government for the protection of trade, may, Adam Smith remarks, "have been useful for the first introduction of some branches of commerce, by making at their own expense an experiment which the state might not think it prudent to make." And the trade of England was certainly in its early stages greatly furthered by the action of the Merchants Adventurers. The abuse to which such corporations are liable is the restriction of the greater part of the trade to the directors of the company and their particular friends, and the enforcement of burdensome regulations with a view to that end. The Merchants Adventurers were not always free from this evil; but by the interference of parliament, as we have seen, the terms of admission were reduced, and, ANDERSON tells us, from the middle of the 17th century no complaint was made against them. Smith admits that the RUSSIA and Eastland Companies were not, in his time, oppressive. The Turkey trade, he says, notwithstanding recent legislation to open the corresponding company fully, was still considered by many people as very far from being altogether free. He does not believe the AFRICAN COMPANY, though accused of "restraining the trade, and establishing some sort of improper monopoly," really open to that charge. But he censures it on the ground that it did not fulfil its duty of properly maintaining forts and garrisons. And, where such maintenance is necessary from the trade being with barbarous or semi-civilised communities, he holds that regulated companies are less likely to attend to it than joint-stock companies, first, because the directors of the former have no interest in the prosperity of the general trade of their company, and may even be gainers by its limitation; and, secondly, because they have no adequate fund at their disposal, the company possessing no common stock, and being dependent for their outlay on the casual revenue from admission fines and corporation dues. While Smith appears scarcely to allow the regulated companies due credit for the part which most competent authorities assign them in the extension of English commerce, it is, doubtless, true that, when he wrote, the services which such corporations were fitted to render were substantially exhausted, and, as he says, the highest eulogy that could be bestowed on them was that of being merely useless.

[J. Wheeler, *Treatise of Commerce*, 1601.—A. Anderson, *Historical and Chronological Deduction of the Origin of Commerce*, 1764.—G. Schanz, *Englische Handelspolitik gegen Ende des Mittelalters*, 1881.—W. Cunningham, *Growth of English Industry and Commerce*, 1890.—In the present article we are much indebted to *Foreign Commerce of England under the Tudors* (Stanhope Essay for 1883, by John Bruce Williamson), an excellent abstract of Schanz, with information from other sources.] J. K. I.

ADVICE. Primarily, an order given by one person to another to perform some act of business, such as the payment of a bill of exchange, for him—used also in the sense of giving information on business matters more generally.

AFRICAN COMPANIES, EARLY. The circumstances of trade with Africa, or rather with Africa excluding the Mediterranean coast, were of such a nature as to favour particularly the formation and maintenance of privileged trading companies. The trade was sufficiently dangerous to suggest the need of special privileges, and not sufficiently profitable to permit of being carried on without them. England, however, was not the first country to enter into trading relations with the west coast of Africa. Portugal held that position, and practically enjoyed a monopoly till 1536. In that year we hear of English adventurers and of their success. Benin on the Guinea coast was the attraction of the traders. The venture was probably repeated more than once; without leading immediately to the formation of a company. That result, however, soon ensued, and the first charter was granted, the precursor of many others.

(1) 1588; Elizabeth granted to certain merchants of Devonshire, Exeter, and London a charter giving exclusive trading privileges for ten years to the rivers of Senegal, Gambia, and the neighbouring district. This company, called *The Guinea Company*, was in reality the forerunner of the African companies, among which it may itself be numbered. They were all companies formed to trade with the west coast. Under the auspices of this company several voyages were made, the chief goods brought back being pepper, ivory, palm oil, cotton cloth. It seems to have been very unsuccessful, owing in part to the action of "interlopers" or independent traders.

(2) 1618; a new exclusive charter to Sir Robert Rich and other Londoners. It too was unsuccessful, first through the action of private traders and secondly owing to the very small profit gained by those engaged in this trade

before the development of the slave trade between the west coast and the English plantations in America.

(3) 1631; a new company was formed, the charter granted to Sir Richard Young, Sir Kenelm Digby, and others for thirty-one years, the limits assigned extending from Cape Blanco to the Cape of Good Hope. Similar causes to those before enumerated appear to have led to its dissolution.

(4) 1662; a fourth company formed this time with the definite object of conveying 3000 slaves a year to the American settlements. Its development was interfered with by wars with the Dutch, and it gave way to—

(5) 1672; the *Royal African Company*, which really bought out the rights of the proprietors of the foregoing. These, like other trading companies of the time, were based on grants of exclusive privileges to certain persons made by royal charter. As such they were doomed by the act passed after the Revolution of 1688, whereby all exclusive privileges except those authorised or granted by parliament were withdrawn. The African trade was thus thrown open though it must be remembered that the company was not destroyed. Its exclusive rights were taken away; but (1698) some part of these rights were restored by statute (9 & 10 Will. III.) in regard of the settlements and forts which had to be supported. Traders other than those belonging to the company were burdened with differential duties. From this time onwards disputes continually arose as to the expediency of restriction. But despite the attention devoted to the trade, it continued to be most unprofitable. At one time its stock dropped to 4½, and though it rose above this low figure it seems never to have approached par except at the time of the SOUTH SEA BUBBLE. In consequence of the low credit it stood in, and of the increased liabilities incurred by the company, it was resolved to transfer its property to a new company composed of the proprietors of the old company and its creditors, and—

(6) 1750; a new African company was established. It was of course without exclusive rights. In 1752 the property of the former company was finally transferred to its hands.

[Anderson, *History of Commerce.*—Macpherson, *Annals of Commerce.*—Rymer, *Fœdera.*—Lansdown MSS. in Brit. Mus.] E. C. K. G.

(7) 1791; the *Sierra Leone Company* may be classed with the early African companies in the sense that the acts of parliament establishing and determining it both precede the act determining the old African companies.

The Sierra Leone Company originated in the philanthropic schemes of certain gentlemen who (1787) formed themselves into a committee and raised a fund for assisting destitute blacks, most of whom had been the victims of the slave trade, to settle in Sierra Leone. The project very quickly took the form of a regular company, and in 1791 an act was passed incorporating the Sierra Leone Company. In 1800 letters patent were issued definitely granting the peninsula of Sierra Leone, so far as was in the power of the crown, to the company. But the French war very adversely affected the fortunes of the company, and heavy subsidies were granted from imperial funds to sustain it, so that in 1807 an act was passed providing for the extinction in seven years' time of the Sierra Leone Company and its rights over the colony. In 1809 a charter was granted to the company providing for the "Colony of Sierra Leone," and after the powers given to the company had expired, this charter was (in 1821) regranted direct to the colonists, who were then placed directly under the crown of Great Britain. C. A. H.

AFRICAN COMPANIES, RECENT. It would appear from a review of historical facts that in periods when a number of different civilised nations have been actively competing for the possession or settlement of an unallotted region, the favourite method of occupation has been the quasi-national company. The recent allotment of a great portion of the African continent amongst chartered companies is on a par with the early settlement of North America and the West Indies.

Putting aside the Congo Free State, which in some respects is analogous to a chartered company, we have in order of time the *Royal Niger Company* (chartered as the *National African Company* in 1886) dominating the basin of the river Niger on the west, the *Imperial British East African Company* (1888) on the Somali coast to the east, and the *British South African Company* (1889) between the Zambesi and the British colonies to the south. All these are British companies, and all hold a royal charter. A German South-West African Company has been at work for some years with indifferent success, and does not seem to enjoy any privileged position. The *German East African Company*, which is chartered, was formed in 1888 by a coalition of the private Commandite Company and Karl Peters and Co., to compete with the British company in the Somali and Zanzibar districts.

An amalgamation of powerful houses in West Africa is at this time moving to obtain a charter as the *Oil Rivers Company*. The *African Lakes Company* is unchartered and is likely to become merged with the *British South African Company*. The *Congo Company* is an ordinary one, with its seat of operations in the Congo Free State. The "*United African Company*" of 1879 was the parent of the "*National African Company*," now the *Royal Niger Company*; it successfully competed with and eventually absorbed two French companies which received considerable support from their government.

The new British companies differ from the last of the old ones—the *Sierra Leone Company* (see AFRICAN COMPANIES, EARLY)—in being avowedly commercial. As explained in the article on COLONIES, *Government by Companies* (*q.v.*)—they are similar in conception and aim to the old *Royal African* and *Guinea Companies*. Governments, however strong, have usually shrunk from the responsibility of administering a large unknown tract of territory, but have been willing to encourage the hazards and adopt the successes of a company. In the first blush of African development Bechuanaland was annexed as a protectorate under the immediate care of the British crown, but this policy was too severely criticised by the timid to encourage its repetition in dealing with African territories. When the movement went on and in various parts of Africa a number of ordinary commercial companies had secured valuable concessions or established the nucleus of a trade, their present security and the future establishment of a colonial dependency was assured by their consolidation into large associations under boards of directors of recognised substance, with wide powers over considerable extents of territory, and enjoying the prestige of a royal charter.

The charters of the existing companies are all very similar. That of the *South African Company* has a special colouring, in that two or three of its provisions (*Clauses* 10, 17, 18) appear to contemplate the future transfer of its powers to a crown colony; for instance it may make "ordinances" subject to confirmation by the secretary of state. All through the charters modern caution and modern philanthropy are conspicuous. The control of the crown through one of the secretaries of state is secured at every point, especially as regards any foreign relations. In the case of the *Royal Niger* and *Imperial British East African Companies* this control is exercised through the foreign office; in the case of the *British South African Company* through the colonial office. The difference of the controlling department was determined solely by the fact that in the case of the first two companies their immediate contact was with foreign states, in that of the *British South African Company* it was with British colonies and protectorates. The stipulations in respect of the slave trade and liquor traffic with the natives are the offspring of a humanitarian age. Subject to these limitations the companies have wide powers, not only of carrying on commerce and industries on their own account, but of granting concessions and powers to individuals for every sort of undertaking. They have all the attributes of large joint-stock companies with some of those of independent states. But they cannot enjoy or create any monopoly of trade.

The *Imperial British East African Company* has at present (1892) less individuality than the others; part of its sphere is within the territory of the sultan of Zanzibar and there it is bound to use the sultan's flag and conform to the sultan's trade restrictions. Herein the different genius of the British and German companies (see COLONIES, *Government by Companies*) was well illustrated. Both had their sphere of operations in the territory of the sultan; the British company, as just mentioned, was carefully kept by the British government subservient to their ally; the German company everywhere hoisted the German flag and displayed its nationality; it was, in fact, the German government working through the company for paramount influence.

The sphere of influence dominated by Germany through its *East African Company* lies between those of the *Imperial British East African Company* and the *British South African Company*, stretching from the east coast inland to Lake Tanganyika and the Congo Free State. It thus covers some of the richest country in the Continent.

The commercial success of the *Royal Niger Company* has, on the whole, been considerable; that of the *South African Company* is described in its Annual Reports.

[The charters of the three companies are to be found in the *London Gazette* of 13th July 1886 (Niger),—7th Sept. 1888 (East African),—20th Dec. 1889 (South African),—and an account of the first and last in the *Colonial Office List* for 1890. The *Royal Niger Company* and *British South African Company* have printed interesting accounts of their development for private circulation. For history since 1892 see *Annual Reports of the British South African Company,—of the Administrator of East Africa,*—and *on Northern and Southern Nigeria*; also *Précis of Information concerning the British East Africa Protectorate.* See below, COLONIES, GOVT. OF, BY COMPANIES.] C. A. H.

AGAZINNI, MICHELE (an Italian economist of the commencement of the 19th century), published a system of political economy not destitute of original ideas, or, at least, of an original manner of presenting old ones. He had a clear idea of what was later called by Senior and Carey the *cost of reproduction*, and makes it the centre of his theory of value. Every producer, according to Agazzini, obtains for his produce a price determined by the cost (in labour and abstinence) which the consumer *saves*; this same law holds good for the price of commodities, of labour, and of capital. The law of supply and demand (he says) regulates current prices, and the cost of reproduction normal value. All this is, however, explained in a language totally lacking technical precision. His most important work was first written and published by him in French under the title:

La science de l'économie politique, ou principes de la formation, du progrès et de la décadence de la richesse, et application de ces principes à l'ad

ministration, 1822. Paris et Londres, Bossange père. It was published at Venice in Italian in 1827. Later, in 1834, Agazzini published a critical essay on Smith, Say, and Malthus, in which only the history of the doctrines concerning *value* are noteworthy. He is particularly successful in the correct exposition of the doctrines of the mediæval canonists. *Sconvenevolezza delle teoriche del valore insegnate da Smith, dai professori Malthus e Say e dagli scrittori più celebri di pubblica economia*, Milano, Fontana, 1834. M. P.

AGENCY, LAW OF. An agent is a person authorised by another (called the principal) to act on his behalf. An agent authorised to act for a special purpose only is called a particular agent; if there is a general authority to act within a given sphere, the agent is called a general agent. A partnership is an instance of general agency in the widest sense, each partner being, as a rule, considered the agent of his copartners for all purposes coming within the scope of the partnership business. An agent may not, according to English law, derive any concealed profit from his agency, and he may not, as a general rule, delegate his authority to another person. An agent may in his dealings with third parties act as principal, or he may state the fact of the agency without disclosing the name of the principal, or he may deal on behalf of a named principal. The rules of law concerning the liabilities and mutual relations of the various parties in all these cases are too complicated to be stated here, and the general rules are often modified by the customs of particular localities or particular trades. The authority of an agent acting on behalf of a corporate body cannot extend beyond the limits imposed upon the sphere of action of the corporation either by Act of Parliament, or by the charter of incorporation or by the memorandum of association (see ULTRA VIRES). E. S.

AGENTS OF PRODUCTION. The causes or requisites of production, often called "agents of production," may be divided into two classes: human action and external nature; commonly distinguished as "labour," and "natural agents." The first category comprises mental as well as muscular exertion; the second, force as well as matter. To the second factor is sometimes applied the term *land*: in a technical sense, denoting not only the "brute earth," but also all other physical elements with their properties. But this term is more frequently employed in another classification, according to which the agents of production are divided into three classes—land, labour, and capital. Of the two classifications which have been stated the former appears the more fundamental and philosophical. That "all production is the result of two and only two elementary agents of production, nature and labour," is particularly well argued by BÖHM-BAWERK in his *Kapital und Kapitalzins*, pt. ii. p. 83. "There is no room for a third elementary source," he maintains. This view is countenanced by high authorities, of whom some are cited below. Even J. S. MILL, who is disposed to make capital nearly as important as the other members of the tripartite division, yet admits that "labour and natural agents" are "the primary and universal requisites of production" (*Pol. Econ.*, bk. i. ch. iv. § 1). Prof. Marshall, dividing the subject more closely, thinks "it is perhaps best to say that there are three factors of production, land, labour, and the sacrifice involved in waiting" (*Principles of Economics*, p. 614, *note*). For further remarks on the third species of agent see CAPITAL.

In the case where both labour and natural agents are required, the most frequent and important case, the question may be raised whether nature or man contributes more to the result. According to QUESNAY (*Maximes*, Edn. Oncken, p. 331) land is the sole source of riches. According to Adam SMITH, in manufactures "nature does nothing, man does all" (*Wealth of Nations*, bk. ii. ch. v.) The better view appears to be that the division of industries into those in which labour does most and those in which nature does most is not significant. It is like attempting "to decide which half of a pair of scissors has most to do in the act of cutting" (Mill, *Pol. Econ.*, bk. i. ch. i. § 3).

Agents of production may be subdivided into those which are limited, and those which are practically unlimited. This distinction applies principally to natural agents. For labour may in general be regarded as an article of which the supply is limited. The ownership or use of those agents of production which are limited and capable of being appropriated acquires a value in exchange. Hence rent of land and wages of labour take their origin.

To account for the difference in the rents paid for different lands, it has been usual, after RICARDO, to arrange the lands in a sort of scale of fertility: No. 1, No. 2, and so on. Upon this classification it is to be remarked that productivity, the real basis of the differences in question, does not vary according to any one attribute, such as the indestructible powers of the soil, or proximity to the centres of industry; but upon a number of attributes (compare B. PRICE, *Practical Pol. Econ.*, chapter on "Rent"). Moreover a scale in which lands, or other natural agents, were arranged according to their productive power, would hold good only so long as the other factor of production, human action, might remain constant. A light sandy soil may be more productive than a heavy clay, so long as the doses of labour applied to each are small. But the order of fertility may be reversed when the cultivation is higher. As Prof. Sidgwick remarks "these material advantages" [afforded by natural agents] "do not remain

the same in all stages of industrial development: but vary with the varying amounts of labour applied, and the varying efficiency of instruments and processes" (*Pol. Econ.*, bk. i. ch. iv. § 3). Compare Prof. Marshall, *Principles of Economics*, bk. iv. ch. iii. § 4.

A similar difficulty attends the attempt to arrange the other agent of production, human labour, in a scale of excellence; whereby to determine what has been called RENT OF ABILITY (*q.v.*). Prof. Macvane has noticed this difficulty in an article on "Business Profits" in the *Quarterly Journal of Economics* (Harvard) for Oct. 1887. Prof. Walker, in a reply to Prof. Macvane in the same journal, April 1888, admits and very happily illustrates the difficulty (p. 227).

[On this subject as many references might be given as there are treatises on political economy. The twofold classification above indicated is illustrated by the following:—HOBBES, *Leviathan*, beginning of ch. xxiv. ("The plenty of matter" consists of "those commodities which from the two breasts of our common mother, land and sea, God usually either freely giveth, or for labour selleth to mankind").—PETTY, *Treatises on Taxes* (3d ed. 1685), ch. viii. p. 57 (labour the father, land the mother, of wealth).—BERKELEY, *Querist*, Query 4. ("Whether the four elements and man's labour therein be not the true source of wealth.")—CANTILLON, *Essay*, pt. i. ch. i. (land the matter and labour the form of riches).—COURCELLE-SENEUIL, *Traité théorique*, bk. i. ch. iii.—Hearn, *Plutology*, ch. ii.] F. Y. E.

AGIO. An Italian word, the original meaning of which is "ease, convenience." It was introduced into general mercantile language to express the additional sum payable by a person who wished to exchange one kind of money against another kind, the kind taken in exchange being in greater demand than the kind given in exchange; the person effecting the exchange paid the premium for his convenience. The expression when now used is employed in countries where a premium is payable on metallic money, and where paper money with a forced currency is the regular medium of exchange. E. S

AGIOTAGE, OR AGIO, was a term first used in Venetian finance to denote the difference in exchange between depreciated currency and metal of full value. Such depreciated currency formerly consisted mainly of debased or worn coins, but more recently paper money, whether bank notes or government notes, have afforded illustrations under this head. The banks established at Venice, Hamburg, Genoa, Amsterdam and elsewhere, were bound by law to receive deposits and make payments according to certain standards, and the premiums charged upon such money as compared with the general circulation represented the *agio* payable to the banks in question. These banks were used in making international payments for the reason that their standard was a fixed, not a varying quantity, and served greatly to introduce the system of economising coinage by exchanging bills and promises to pay instead of actual metal. See BANKS, EARLY EUROPEAN.

AGNATI (ADGNATI). The members of a Roman family having a common legitimate male ancestor in the male line, either naturally or by fiction of law (adoption or marriage with *in manum conventio*). *Cognati*, on the other hand, are relatives in the modern sense. E. S.

AGRICULTURAL COMMUNITY. In giving an account of agricultural communities it seems best to follow the plan adopted by Mr. Seebohm in his standard work on the *English Village Community*, and to proceed from known and undisputed facts, open to present observation, back through historical evidence which step by step decreases in authority and increases in difficulty of interpretation until we arrive at the tribal organisations, clans, and kindred settlements of prehistoric times; that is to say, the comparative method may be first applied to existing communities, and to the traces and survivals of the past, and then an explanation may be attempted by the historical method.

Communities in which land is practically owned and cultivated in a collective manner, according to customary rules of great antiquity, and in which the rights and powers of any individual are strictly limited, still exist over large areas and among vast populations. In Central Asia the tribes of pastoral nomads are made up of groups, each under the authority of the head of a family, and nothing is the subject of separate ownership except clothes and weapons (LE PLAY, *Ouvriers Européens*). When a group becomes too large a division is made by the head in a manner suggestive of the division made between Abraham and Lot.

More interest, however, attaches to the communities which have a settled system of agriculture in a fixed area. The most important at present is the Russian MIR, which may be described as "the aggregation of inhabitants of a village possessing in common the land attached to it." Each male inhabitant of full age is entitled to an equal share of the land. The period of distribution at present varies in different districts, nine years being the average, and the limits from three to fifteen. The arrangements for the partition are decided by the peasants under the presidency of the *stavosta* (headman or mayor). All the arable land is divided into three concentric zones which extend round the village, and these zones are again divided into three fields to admit of the three-field system of cultivation. These fields again are divided into long narrow strips, in length from one to four furlongs, and in breadth from one to two rods. The division of the parcels is arranged so that every man has

at least one parcel in each of the great fields. The bundle of parcels is arranged before the lots are drawn. As a rule there is not much difference in the fertility of the land, but in some cases the measuring rods are of different lengths according to the fertility. Formerly a certain amount of forest, pasture, and meadow was attached to each village, the inhabitants paying a kind of labour rent, but by the Act of Emancipation of 1861 this part of the land was made over to the lord. The cultivation is carried on in a strictly routine manner, the time of sowing, reaping, etc., being fixed by the village assembly, and there being no division between the parcels of land, and no separate approach. The dwelling-house, *izba*, with its enclosed garden ground, is, however, private property, although even in this case the owner cannot sell it to a stranger without the consent of the *mir*, which has always the right of pre-emption. Before the abolition of serfdom the lord of the manor (to give the nearest English equivalent) granted about half the arable land to the SERFS, and cultivated the remainder with their forced labour of about three days a week. On the emancipation a rent (redeemable—the money being in many cases advanced by government) was fixed, and a minimum amount of land assigned to each serf. Power was given to the *mirs* by a two-thirds majority to abandon the system of collectivism in favour of individual ownership, but on the whole the *mir* has been rather strengthened, and is taken by the government as the basis of taxation. From the economic standpoint the most striking objections to the *mir*, which also seem to render its long continuance under modern conditions doubtful, are (1) the natural growth of population under the system of equal division. Hitherto this increase has been slow, owing partly to the large mortality of the children, and partly to the women being much older than their husbands, and to the prevalence of immorality. But the infant mortality might readily be lessened, and the system of unequal marriages, which rests on the convenience of the head of the family in obtaining women-servants by the marriage of his boys, seems to be falling into disfavour. (2) The second objection lies in the constraint placed upon individual enterprise by the compulsory cultivation according to fixed methods, in the impossibility of highly extensive cultivation with the periodic divisions of the land, and the absence of enclosures, and in causes similar to those which in England in the 15th century secured the victory of *several* (enclosed, individual) over *champion* (non-enclosed, common) cultivation (compare E. de LAVELEYE, *Primitive Property*, ch. iii. "Economic Results of the Russian Mir").

Next to Russia, India is the most important example of the present existence of village communities, although in the manner described by Sir H. Maine (*Village Communities*, Lect. IV.) their primitive simplicity and essential features were sacrificed for a time at least to alien English and Mohammedan law, the ZEMINDAR or official collector of customary taxes having been converted into a kind of manorial proprietor. In recent years, however, the tendency has been to protect these communities, and over large districts to regard them as the agricultural and fiscal unit. The general features—allowance being made for differences in climate—are not unlike those of the Russian *mir* and the early Teutonic settlements described below. There is the division into strips, and the cultivation according to minute customary rules of the arable portion, and there is a certain portion of waste enjoyed as pasture by the different members. The village consists of households, each under a despotic head, the family life being characterised by extraordinary secrecy and isolation. In many communities the customs are declared and interpreted not by a council of elders but by the headman alone, his office being sometimes hereditary and sometimes nominally elective. The various trades or crafts necessary to a self-supporting village are also often hereditary, *e.g.* the blacksmith, the harness maker, etc.

In Java a system prevails closely analogous to that of India. The village is jointly responsible for the payment of taxes, and there is common use of the waste. The rice fields are periodically divided amongst the village families and the houses and gardens are private property. Irrigation is conducted according to communal rules and plans (cp. De Laveleye, *Primitive Property*, ch. iv.) The *Allmends* of Switzerland furnish another example of common cultivation. These are lands belonging to the communes, the right of use, however, being hereditary in certain families only, and most residents even of long standing and although having political rights, are excluded. The *Allmend* furnishes wood for fire and building, pasture for cattle on the *alp*, and a certain portion of arable land. In some cases there is still periodical division of the land, in others the land is let and the proceeds devoted to the expenses of the commune.

In Scotland, in the crofting parishes, we find as a rule that the tenants have a certain amount of hill ground on which they have the right to pasture so many sheep or cattle, the number varying in different cases according to the holding. As soon as the crops are gathered the ground is thrown open in the same way. There are, however, no periodical divisions, and the village had no rights not derived from the feudal proprietor until the recent legislation giving effect to presumed custom established fixity of tenure at a "fair rent," and made provisions for consolidating holdings.

In England there still survive a number of

Commons and Lammas-Lands in which certain members of a village have definite rights, and there are abundant traces of the old agricultural communities. In most of the countries of Europe where private property has become the rule there are also survivals which point to the wide prevalence of customary cultivation in common. On the historical development and gradual decay of the village community, the reader should consult Mr. Seebohm's remarkable work, which, on its broad outlines has been mainly followed in the rest of this article. Although nominally this work is confined to England, the search for a rational explanation led the writer to make a wide survey of many other countries at different times. Before Mr. Seebohm's work appeared many writers had called attention to the wide prevalence of common cultivation in England in recent times. A passage is quoted by Sir Henry Maine (*Village Communities*, p. 90) from Marshall's *Treatise on Landed Property* (1804), in which the writer from personal observation of "provincial practice" attempts to construct a picture of the ancient agricultural state of England. He notices the division of the arable land into three great unenclosed fields adapted for the regular triennial succession of fallow, wheat (or rye), and spring crops (oats, beans, peas, etc.) He describes also the division of these fields into strips and the mode in which the meadows and the waste were used. He gives also statistics on the extent to which in his day these open and common fields existed, which have been summarised by E. Nasse, *The Common Field System for England in the Middle Ages*. Mr. Seebohm points out (p. 14) that taking the whole of England with roughly speaking its 10,000 parishes, nearly 4000 Enclosure Acts were passed between 1760 and 1844, the object of these acts being expressly to get rid of the old common unenclosed fields. But in spite of the Enclosure Acts the old system has left many indelible traces on the surface of the land itself and the nature of the holdings in the size and shape of the fields (compare also Canon Taylor's paper in *Domesday Studies* on "Domesday Survivals"). The open fields were nominally divided into long acre strips a furlong (*i.e.* a furrow-long) in length and four rods in width. Originally these strips were separated by green *balks* of unploughed turf, and these balks can still be traced. A bundle of these long acre strips a furlong in width made a "shot" (Anglo-Saxon) "quarentena" (Latin) "furlong" (old English), and these furlongs were divided by broader balks generally overgrown with bushes. The roads by which access was obtained to the strips usually lay along the side of the furlong and at the end of the strips, and these roads, often at right angles to one another, still survive. There are further traces on the land itself of the old "head-lands" (Scotch headrig), the "linches," "butts," "gored acres" and pieces of "no man's land" (Seebohm, p. 6). Canon Taylor in the paper cited above gives some very remarkable examples of the effects of the same method of ploughing in these open fields having been practised for many generations.

But not only on the surface of the land, but in the present distribution of the fields and "closes" constituting a farm, the effect of its common open fields may be traced. Taking any manor as a centre we find the farms of which it is composed not consisting only of solid blocks (as in the newly-settled land of the United States), but of a number of little fields scattered about in the most "admired disorder," and at a considerable distance from one another. Of the present inconvenience and want of economy involved in the arrangement of farming land there can be no doubt from the modern agricultural standpoint, and if a *tabula rasa* could be made of the land such a wasteful method of distribution would never be adopted. The inference is plain that this irregular straggling scattered ownership and occupation of the land must be a survival from a past custom of which the inner meaning has been lost. The great merit of Mr. Seebohm's work is that he provides a key for the explanation of this peculiarity, and whatever modifications may be found necessary with further research this explanation is certainly at any rate a most valuable working hypothesis. Evidence of the full existence of the open-field system is easily perceived as far back as the 16th, 15th, and 14th centuries. We have the literary remains of the great agricultural controversy, in the two former centuries, on "champion" and "several" already alluded to, and for the 14th century we have the graphic touches of Piers Plowman in describing his "fair felde" full of all sorts of folk. Then through a series of documents such as the *Winslow Manor Rolls* (reign of Edward III.), the *Hundred Rolls* (Edward I.), the records of various abbeys, the *Boldon Book* (1183 A.D.), we are taken back to the great *Domesday Survey* (1086 A.D.) So far the result of the evidence is certainly to show that the further we go back the more clearly do we discover the wide prevalence of the open-field system and cultivation in common. Up to the time of *Domesday* at any rate, Mr. Seebohm may be admitted to have proved his case, and it will be convenient in this short summary at this point to abandon the retrogressive chronological method and to notice the principal features of the system at the time of the Conquest and the processes and causes of its decay.

At the completion of the Conquest there were certainly manors everywhere, some belonging to the king, others to great barons and prelates, and others to the mesne tenants of these greater lords (cp. Madox, *Exchequer*). Some lords held many manors and were represented by a steward or Reeve (*villicus*). The typical Manor was a

manorial lord's estate with a village or township upon it under his jurisdiction and held in the peculiar system of serfdom known as villenage.

Passing now to the internal economic constitution of one of these manors and leaving the legal difficulties on one side, we observe that the arable land was divided into the lord's *demesne* and the land in villenage. The whole of the arable land was in three great open fields, and the demesne land was interspersed with the villein's land. For the present purpose the *liberi homines* may be omitted, and we may observe that there were three classes of tenants in villenage, namely *villani* (proper), *cotarii* or *bordarii* (cottagers), and *servi* (slaves). The chief interest attaches to the villeins. The typical villein holding was a virgate or yardland, and a VIRGATE normally consists of thirty acres, namely ten of the long-acre strips in each of the three great open fields. It has been calculated (Seebohm, p. 102) that about 5,000,000 acres were under the plough in the counties named in the survey, about half being held by the villeins.

The normal virgate was an indivisible bundle of strips of land passing with the homestead by regrant from the lord to a single successor. There were also rights to certain use of meadow and waste. The virgates with their homesteads were sometimes called for generations by the family name of the holder. The central idea of the system was to keep up the services of various kinds due to the lord of the manor, and the virgate was a typical family holding. The services consisted of so much WEEK WORK, generally three days, an uncertain quantity of boon-work (*ad precem*, precarious) at the will of the lord, and certain payments, occasionally of money but more frequently in kind. There were also restrictions upon the personal freedom of the villeins, *e.g.* the lord's licence must be obtained on the marriage of a daughter, or the sale of an ox, etc., and no one could leave the land without the lord's assent.

The normal outfit of the VILLEIN was a pair of oxen, and the ploughing was usually done with a team of eight oxen. Thus even so far as the beasts were concerned the co-operation of at least four villeins was required. We find also that certain craftsmen held their virgates in virtue of their services to the village, and the principal wants of the community were satisfied by its own labour. Everywhere and in everything custom was in force limiting the nature and amount of the services and prescribing the times and methods of cultivation. The principal differences between the English village community at the Conquest and at the time of the Black Death (1349 A.D.) are to be found in the gradual break-up of these overpowering customs and the increasing scope given to individual enterprise and variety. The nature of the movement is shown by the increasing irregularity of the holdings and the departure from the normal type, by the progressive limitation of the services demanded and above all by the substitution of money payments for these services and payments in kind. This commutation in the mode of rendering tribute to the landowner was the most potent cause of economic progress in the mediæval period. By the time of the BLACK DEATH the option at any rate of money payments had become usual. The landowner found his advantage in the greater efficiency of hired labour, and the villein had the power of benefiting himself by exceptional industry.

For a long time, however, the customary methods of cultivation prevailed, and, as pointed out above, the open fields remained down to the close of last century. The principal point to observe is that starting with the Conquest, economic and agricultural improvement has been closely connected with the disintegration of VILLAGE COMMUNITIES. The nature of this movement is, however, often overlooked, because a comparison is made at different times between different parts of the social scale, the modern farm labourer being compared to the villein with the virgate, to the apparent disadvantage of the former in spite of serfdom. But the true counterpart of the modern labourer was the mediæval slave, and the villein corresponds to the modern small farmer or landowner.

When we go back beyond the Conquest we find strong evidence of the prevalence in the eastern districts of Britain of these village communities in serfdom under manorial lords, though the points of similarity are at first disguised by the difference of language. There seems, however, little doubt that, whatever may have happened at the time of the Saxon invasion and in the dark period which followed after the departure of the Romans, as soon as the Saxons were settled they developed (or adapted) the essential economic features of the manor (compare the Laws of Ine quoted by Mr. Seebohm, p. 142). It is at this point that the principal controversy arises. The older view generally associated with the name of Von Maurer was that the Saxons imported into this island the fully-developed MARK SYSTEM. The members of the *mark* were freemen, and in their assemblies decided on points of interest to the community. The arable land was divided, and the portions of meadow were allotted by popular vote. According to this view the village community in historical Saxon times had degenerated from this original type, the overlordship of a single individual having taken the place of the free assembly of equals. Against this view, however, Mr. Seebohm has made out a very strong case. His principal points are that the Saxons in their own homes do not appear to have cultivated land on the THREE-FIELD SYSTEM; that as soon as historical

evidence is available we find the closest analogies between the agricultural systems in Saxon-England and that in the Romano-Teutonic portion of southern Germany; that there is no sufficient time allowed for the full development independently of the manorial from the mark system, and that there is no reason to suppose that the Saxons exterminated the inhabitants and treated the land as if it were virgin forest. The conclusion is that to a great extent the Saxons simply adopted the system which they found already established by the Romans during their four centuries of occupation. This opinion is supported by the close analogy between the conditions of tenure of the Romano-British *colonus* and the later *villani* (Seebohm, p. 267). Thus the Roman *villa* is made to contribute some of the most important elements of the late English village. But now the question arises:—Whence were the elements of the Roman system in Britain derived? Did the Romans themselves import their own agricultural customs and impose them upon the inhabitants, or did they adapt what they found to their own uses? It is known from other sources that the most usual course of the Romans in their policy of *parcere subjectis* was to amalgamate as far as possible foreign customs with their own. It is known also from historical evidence that before the Roman invasion in many parts of Britain there was a settled system of agriculture, notably in the south-east, and it would be in accordance with their usual practice for the Romans to take what they found as the basis of their own methods of cultivation and extracting revenue from the people. We are thus thrown still further back, in order to discover the elements of this system which existed in Britain before the Roman invasion, and in the search we discover, following the lines of Mr. Seebohm's investigation, that through the whole period from pre-Roman to modern times there were two parallel systems of rural economy the essential features of which were preserved in spite of the Roman, English, and Norman invasions—namely the *village* community in the east and the *tribal* community in the west of the island. Neither system was introduced into Britain during a historical period of more than 2000 years. The *village* community of the east was connected with a settled system of agriculture; the equality and uniformity of the holdings were signs of serfdom, and this serfdom again had itself arisen from a lower stage of slavery. The *mark* with its equal freemen, so far as this part of Britain is concerned, is thus an untenable hypothesis. We have equality and community, it is true, but they are based not on freedom but on organised serfdom. On the other hand the TRIBAL SYSTEM which prevailed in the west of Britain (especially Scotland and Wales) and also in Ireland was connected with an earlier stage of economic development mainly of a pastoral kind. The tribal community was bound together by the strong ties of blood-relationship between free tribesmen. This free equality involved an equal division amongst the tribesmen according to various tribal rules, and this custom of sub-division has survived to our own day in the "RUNDALE" or "run-rig" system of the west of Scotland and Ireland. In this brief summary many interesting points have been omitted and many certainly require further investigation. The origin of the size and shape of the long-acre strips, the original object of the irregular scattering, and the way in which the system became solidified in such an inconvenient form for modern requirements, can only be alluded to. Perhaps the most remarkable general result is that co-operation which we are accustomed to regard as a purely modern product is very ancient, but whether this co-operation arose, unlike most other ancient institutions, purely from rational elements and from motives of economy and convenience, has not yet been the subject of sufficient investigation. Certainly hitherto the principal danger in re-constructing primitive societies has been to import too readily modern ideas and not to allow sufficiently for what we should now call irrational elements.

[Besides the works referred to above the reader may consult for the history of English villenage, *Six Centuries of English Work and Wages*, by Prof. Thorold Rogers; and for other matters Coote's *Romans in Britain*.—Skene's *Celtic Scotland*; various works and papers by Professors Hannsen and Meitzen and Lamprecht on the open-field system in Germany; also the volumes entitled *Domesday Studies*.—G. L. Gomme, *The Village Community with special reference to the origin and form of its survivals in Great Britain*. London, 1890.] J. S. N.

AGRICULTURAL GANGS. See GANGS.

AGRICULTURAL HOLDINGS ACTS.* An Agricultural Holdings Act for England and Wales was passed in 1875, but, not being compulsory, remained inoperative, and was repealed by the act of 1883, which (not now in force, see Appendix) applies to agricultural and pastoral holdings, to market gardens, and to holdings let to tenants in connection with any employments. The principal provisions of this act come under five heads: (*a*) Compensation for improvements, (*b*) fixtures, (*c*) distress, (*d*) notice to terminate yearly tenancy, (*e*) resumption of holding by landlord for the purposes of carrying out improvements.

(*a*) At common law an outgoing tenant is not entitled to compensation for improvements, except under a local custom. It is now provided that every tenant on quitting his holding shall be entitled to compensation for the improvements made at his own expense during his tenancy. The act enumerates three classes of improvements. As regards the first class (comprising the erection of buildings,

laying down of permanent pasture, making of gardens, etc.), compensation cannot be claimed unless the landlord has given his consent to the improvement. As regards the second (drainage), notice must be given to the landlord, who has the option of executing the improvement at his own cost, charging 5 per cent interest. The improvements comprised in the third class (boning, chalking, liming, application of artificial manure, etc.) may be executed without the landlord's consent and without notice to him. The sum payable for compensation is to represent the value of the improvements to an incoming tenant. Any contract made by a tenant, by virtue of which he is deprived of his rights to compensation, is void.

(*b*) At common law fixtures on agricultural holdings belong to the landlord. The act now provides that engines, machines, fences, or buildings, which the tenant affixes or erects without being obliged to do so, may be removed by an outgoing tenant, unless the landlord (to whom notice must be given) elects to purchase them at a price representing their fair value to an incoming tenant.

(*c*) In ordinary cases the landlord may distrain for six years' arrears of rent, but in the case of holdings coming under the act the right to distrain is now limited to one year's rent. Some partial and total exemptions from distraint are also created by the act. Live-stock taken in to be fed at a fair price payable by the owner cannot be distrained, if other sufficient distress be found, and cannot in any case be distrained for a sum exceeding the amount remaining due from the owner for the cost of feeding. Hired machinery, and live-stock belonging to another person which is on the premises merely for breeding purposes, are not to be distrained at all.

(*d*) The usual tenancy from year to year can be terminated at the end of each year by a six-monthly notice, but in the case of a holding coming under the act, one year's notice is now required in the absence of any special arrangement.

(*e*) The act allows a landlord in the case of a tenancy from year to year to give notice to terminate the tenancy, as to part only, if the land be wanted for labourers' cottages, or gardens, for allotments, for the planting of trees, for mines, quarries, or sand-pits, or for making watercourses or reservoirs, roads, railways, etc. The tenant may, however, within twenty-eight days after receiving the notice, inform the landlord that he accepts it as a notice to quit the entire holding.

See also Appendix, *sub voce*. An act applying to Scotland was passed in 1883; it contains provisions as to compensation, fixtures, notice, and some matters peculiar to Scots law. As regards Ireland, see IRISH LAND LAWS. E. S.

AGRICULTURAL SYSTEMS. ADAM SMITH uses this term in the title of ch. ix. of bk. iv. of the *Wealth of Nations*, as equivalent to "those systems of political economy which represent the produce of land as either the sole or the principal source of the revenue and wealth of every country." The last part of the chapter deals with the policy of favouring agriculture rather than manufactures and commerce adopted by China and ancient Egypt, Hindostan, Greece, and Rome. This policy Adam Smith treats as an agricultural system, presumably because he thought it to have been inspired by a belief that the produce of land is the "principal" source of wealth. But the chief object of the chapter is to explain and criticise the system of the French "economists" or physiocrats, in which the produce of land is represented as the "sole" source of wealth. For an account of this system see PHYSIOCRATS.

Prof. Oncken maintains in the Introduction to his *Quesnay*, that Adam Smith has done less than justice to the "sect" of the "economists."

AGRICULTURE IN ENGLAND. The agriculture of the Romans in England, familiar with writers like Columella, and supplying the needs of an advanced civilisation, was superior to that of their barbarous predecessors or successors. During the Roman occupation the land which was owned by individuals was tilled in one of three ways: (1) by slave labour directed by a steward (*villicus*); (2) by tenants at produce rents (*partiarii* or *métayers*); (3) by free farmers at money rents (*liberi coloni*). [See Dickson's *Husbandry of the Ancients*, Coote's *Romans in Britain*, Daubeny's *Lectures on Roman Husbandry*.] It is probable that among the Romans, the Celts, and the Anglo-Saxons, common tillage was practised (on the question whether the Anglo-Saxon communities ever, in this country, owned the land they cultivated, see COMMONS). In one essential point the farming of the Celtic people who preceded the Romans differed from that of the Teutonic settlers by whom they were succeeded. Among the Celts fresh tracts of grass-land were successively taken in by the co-partners, tilled for corn, and then thrown back into pasture. To this primitive form of nomadic farming the name of "wild-field-grass husbandry" has been given (cp. NASSE on *Village Community*, and Marshall's *Agriculture of the Western Counties*). In the common fields of the Anglo-Saxon communities, on the contrary, pasturage and tillage were permanently separated; grass-land always remained pasture; it was never broken up for tillage. This permanent separation of grass-land from tillage appears a retrogression in farming practice. It is the application to England of a system which was better adapted to the drier climate of the country whence the Saxon immigrants came. Among the early Saxons the soil had been tilled by VILLAGE COMMUNITIES. The land held by the association

was divided into two main divisions: (1) round the homesteads lay permanent enclosures held as private property (cp. Tacitus, *suam quisque domum spatio circumdat*); (2) beyond the village lay the common lands of the association. This latter portion consisted of (*a*) arable fields, sometimes two, generally three, and in later times four, in number; (*b*) meadowland for hay; (*c*) rough wild pasture for live stock. Of the three arable fields one was cultivated each year for wheat or rye, another for oats, barley, peas, and beans, and the third lay fallow. Thus each field every third year was fallow. Both the meadow and arable lands were cut into strips and annually allotted to the use of individuals from putting up for hay or from seed-time. Each partner held scattered intermixed parcels in each of the arable fields, so as to equalise the quality of the land, and to give each a share in the different crops cultivated. The farming was regulated by a system of "field constraint," or later by the REEVE of the manorial lord. After the crops were cleared, separate use terminated and common rights recommenced, the cattle and sheep of the community wandering over the fields before the common herdsman or shepherd (for a detailed account of the system see Seebohm's *The English Village Community*). Co-tillage remained a feature of English farming after the Norman Conquest. Up to the close of the 18th century half the soil of England was thus cultivated, and, in 1879, 600 acres at Stogoursey near Bridgwater were farmed on this system (for the theories respecting the changes effected at the Conquest, see COMMONS). By the close of the 11th century, the immediate lordship of the soil was vested in lords of manors, subject to regulated rights of user enjoyed by the co-operative farmers. The manorial estate was divided into three parts, the DEMESNE, the tenemental land of the associated farmers, and the lord's wastes, over which the live stock of the tenants grazed. The soil was tilled by serfs, by freemen, and by semi-servile tenants, who paid for their land by military or agricultural services. Out of these grades in the rural population sprang the freeholder, the copyholder, and the free wage-earning labourer. The most striking features in mediæval farming were the violent alternations from perpetual cropping to barrenness, from indolence to intense labour, from famine to feasting. Scarcely anything was grown for markets; nearly all the produce was consumed at home by the producers. Arable land exceeded grass-land. No manure was employed; horses were scarcely ever used; oxen were more economical; their food, harness, and shoes were cheaper; when dead they were meat for man. The crops were wheat, oats, barley, rye, beans, peas, flax, and hemp. Rye was the chief grain crop. Roots, artificial grasses, and potatoes were unknown. There was little or no winter keep for live stock; consequently cattle were killed at Michaelmas, after having been well nourished by the aftermath of the meadows, or the stubble and haulm of the arable land, and salted for winter provision. Wheaten bread was a luxury of the richest. The monks were the only pioneers of good farming. In the change from mediæval to modern farming two great epochs must be noted—(A) the Tudor period; (B) the latter part of the 18th century.

(A) The BLACK DEATH, 1348-49-61, is said to have destroyed half the population of the country (see Hecker's *Epidemics of the Middle Ages*; Rogers's *Hist. of Prices*, vol. i.; Jessop, *Coming of the Friars, and other Essays*). The mortality resulting raised the rate of wages 50 per cent. The attempts of manorial lords to fix rates of wages by statute (25 Ed. III.) or to resume personal services, caused the PEASANTS' REVOLT of 1381. This proves that by 1350 the relations of occupiers and owners had settled down into more modern conditions, that tenant-farmers, copyholders, and free wage-earning labourers had replaced the serfs and villeins, that leases had become common, that the customary services of the peasantry were first rendered certain and then commuted for money rents or money wages (see Denton's *England in the Fourteenth Century*, and Ashley's *Economic History*). The effects of the Black Death were social rather than agricultural, and as such will be noted elsewhere. With the close of the Wars of the Roses and the commencement of the 15th century, begins the era of farming for profit which characterises the Tudor period. Feudalism was extinct; commerce progressed; the wool trade flourished; landlords required money, not retainers. Two great changes were introduced: (1) individual for common occupation; (2) the conversion of arable land into pasture. (1) Lords of manors withdrew from the agrarian associations and enclosed their demesnes and wastes; common-field farmers were encouraged to extinguish their reciprocal common rights, and exchange solid tenements for their scattered strips. (2) Arable land was converted into pasture, farms were consolidated, farm-buildings destroyed, and England became a sheep-producing country. The increase of enclosures and decrease of tillage, combined with the dissolution of the monasteries and the absorption of church lands into the estates of adjoining landlords, inflicted serious losses on thousands of cottagers, common-field farmers, and labourers, and produced the widespread social discontent of the Tudor period. It is the first step in the separation of the peasantry from their interest in land and the extinction of the YEOMEN class. Towards the end of the reign of Elizabeth the balance of social relations began to recover its equilibrium. The 17th century was a period of theoretical progress, practically interrupted by civil disturbances. The improvement is shown in (1) the rise of agricultural literature,

beginning with FITZHERBERT and TUSSER; (2) the introduction of new crops—hops (Reginald Scot's *A Perfite Platform of a Hoppe-Garden*, 1574), potatoes (J. Foster's *English Happiness*, 1664), turnips (Sir R. Weston's *Discourse of Husbandry*, 1650), artificial grasses (HARTLIB's *Legacie*, 1652); (3) improved methods of cultivation—Gabriel Plattes advocated drill-sowing; Vaughan (*Water Workes*, 1610) urged irrigation; Blith (*The English Improver*, 1649) studied drainage as a science; (4) increased attention to live stock—(Mascall's *Government of Cattell*, 1605); (5) removal of feudal abuses (stat. 12 Car. II.); (6) increased enclosures (Joshua Lee's *Eutaxia tou Agrou*, 1656).

(B) The work of the 18th century may be summed up in the practical application, diffusion, and extension of these improvements through the work of men like Tull, Townshend, Bakewell, Arthur YOUNG, and Coke of Holkham. Tull was a man of scientific turn, who invented several improvements in implements and was the exponent of drill-husbandry. "Turnip" Townshend introduced into Norfolk turnips and artificial grasses. The alternations of these crops with cereals enabled farmers to observe what, in the absence of chemical manures, was the golden rule of not taking two corn-crops in succession, largely diminished the area of fallows, assisted them to carry more live stock and feed it in the winter, increased their command of manure, and consolidated the light sandy soils of the eastern counties. Bakewell was the founder of the grazier's art. He was the first scientific breeder of sheep and cattle; and the methods he adopted with his Leicester sheep and Leicester longhorns were applied throughout the country by other breeders to other breeds. As population advanced, sheep and cattle were valued more for their carcases than for their fleece or their powers of draught. So long as the common-field system prevailed, Townshend's or Bakewell's improvements were impossible. England, excluded from foreign markets by wars and commercial policy, was compelled to supply the needs of vast manufacturing centres from her native resources. The common-field system, only adapted to meet the wants of producers, was obsolete. Arthur Young was the theoretical, Coke of Holkham the practical, exponent of the new system of large farms and capitalist farmers. Landlords put themselves at the head of the movement, expended money in buildings, granted long leases. New roads and canals opened out new means of communication. Agricultural societies and shows were multiplied; surveys of the country were made by Young, MARSHALL, and the Board of Agriculture, which was constituted in 1793 (see BOARD OF AGRICULTURE). Between 1760 and 1820 more than 6,000,000 acres of land were enclosed. The change produced a new agricultural and social crisis more severe than that of the Tudor period. The century closed with the miseries which resulted from enclosures, consolidation of holdings, and the reduction of thousands of small farmers to the ranks of wage-dependent labourers. The result of the crisis was to consolidate large estates, extinguish the yeomanry and the peasant proprietary, and to sever the connection of the labourer from the soil. The subsequent history of agriculture may be summed up in the application of science to practice under the conditions of land-tenure, with which we are now familiar. Vast capital has been expended on farm-buildings and drainage; machinery and steam have lessened the cost of production; the farmer's resources of crops, winter food, manures, and implements are indefinitely increased; new means of transport have opened new markets in every direction; mechanics, capitalists, architects, geologists, chemists, physiologists, botanists, statisticians, are now enlisted on the side of the farmer. Smith of Deanston (1834) and Josiah Parkes (1843) applied their practical and scientific knowledge to drainage; Reed's cylindrical pipes (1843), Scrogg's machine (1843) for their construction, and the facilities provided by parliament for raising loans for land improvement (1846) enabled landlords to profit by improved science and new appliances. New manures were discovered. Nitrate of soda (1835), Lawes's superphosphates of bone dust (1843), Henslow's superphosphates from coprolites (1843), Odam's ammoniacal manures (1851), revolutionised the old rules of cropping. Inventions in agricultural implements of every description were rapidly produced. New crops such as swedes, field cabbages, kohl-rabi, mangel-wurzel, etc., were introduced. More live stock is kept, and it is better bred, better fed, and more rapidly brought to maturity. Intelligence is more widely diffused both among landlords and farmers. Agricultural statistics supply new and valuable information and record the results of striking experiments. The constitution of the Royal Agricultural Society in 1838, in place of the old Board of Agriculture which expired in 1819, marked the return of prosperity after the disastrous interval from 1795 to 1835. Many legislative improvements were effected, such as the new POOR LAWS, the Commutation of TITHES, the General ENCLOSURES Act, the Enfranchisement of COPYHOLDS, the SETTLED LAND ACTS, the AGRICULTURAL HOLDINGS ACTS. Recently also (1889) the BOARD OF AGRICULTURE (*q.v.*) has been re-established. But in the last fifteen years agriculture has ceased to progress, even if it has not retrograded, owing to the agricultural depression, 1873-89 (DEPRESSION, AGRICULTURAL; DEPRESSION OF TRADE).

[Besides the books mentioned in the text the student is referred to the following works: (1) Professor Rogers's *Agriculture and Prices*; (2)

Professor Rogers's *Six Centuries of Work and Wages*, both which contain an immense amount of valuable information; (3) Prothero's *Pioneers and Progress of English Farming*, which is intended to meet the want of a short history of agricultural progress, especially in the 18th and 19th centuries; (4) and the following original authorities—Arthur Young's *Tours of the English Counties* (Southern, 1768, 1 vol.), Northern (1770, 4 vols.), Eastern (1771, 4 vols.),—and *Tour in Ireland* (1776-79);—Marshall's *Rural Œconomy of the English Counties and Scotland* (1787-98, 14 vols.); —*Reports of the Board of Agriculture*, 1793-1815; —*Reports of the Royal Commissions on Agriculture*, 1820, '21, '22, '33,' 36, '37, and '79-81;—Pusey's *Parliamentary Committee on Agricultural Customs*, 1848;—Sir James Caird's letters to the *Times* as *Times* commissioner in 1850-51;—*Landed Interest*, 4th ed., 1880; and the letters of the commissioner of the *Morning Chronicle* in 1850;—the *Parliamentary Inquiry into Land Improvements*, 1873;—*Report of the Central Chamber of Agriculture on Agricultural Customs*, 1874;—and the *Agricultural Returns* annually published since 1864.]

R. E. P.

AICKIN, Rev. Joseph, author of *Mysteries of the Counterfeiting of the Coin of the Nation . . .* (London, 1696). As a method of "preventing the said abuse for ever," it is proposed that a licence should be required for all occupations in which the materials or implements employed in counterfeiting coin are made, sold, or used. F. Y. E.

AID, Auxilium. A tax, which might be assessed, while the feudal system prevailed, on the knight's fee on three occasions: (1) when the king made his eldest son a knight; (2) when the king gave his eldest daughter in marriage; (3) if the king were made captive, to ransom his person (Dowell, *History of Taxation in England*, vol. i. p. 21). Used also in same sense as Subsidy (*q.v.*)

AID, Rate-in. See Local Taxation.

AIDES, Cour des. The *aides*, or indirect taxes on commodities, were first imposed in France by the States-general in 1355. Instead of entrusting their administration to the existing financial court, the *chambre des comptes* (see Comptes, Chambre des), a new body was created called the *cour des aides*. Before long its functions became almost solely judicial, the decision of disputes arising about the Gabelle on salt and other indirect taxes. Its jurisdiction was curtailed by the usurpations of the *conseil du roy*, and was frequently disputed by the rival *chambre des comptes*. It continued to exist as one of five *cours souveraines* till it was swept away with the other institutions of monarchical France by the Revolution.

[Gasquet, *Précis des Institutions politiques et sociales de l'ancienne France.*] R. L.

AIKIN, John, M.D. (1747-1822) brother of Mrs. Barbauld and author of *General Biography*, *Works of the British Poets*, etc., editor of *Dodsley's Annual Register* (1811-15), the *Athenæum*, etc., published in 1795 his *Description of the Country from 30 to 40 miles round Manchester*, giving details of commerce, manufactures, population, in addition to physical features, history, and biography of leading men—a work still valuable for the history of the Industrial Revolution (*q.v.*) J. B.

AISLABIE, John, born December 1670, sat as M.P. for Ripon 1695-1702, then for Northallerton, and for Ripon again from 1705 to his expulsion. He was chancellor of the exchequer in the Sunderland ministry in 1718, and supported the South Sea scheme for paying off the national debt. When the bubble broke in 1720, a secret Committee investigated his connection with the company and he was expelled the House of Commons. He died in 1742. He wrote:

Speech upon his Defence in the House of Lords against the Bill for raising Money upon the Estates of the South Sea Directors, London, 1721, 4to (three editions; also in Dutch).—*Second Speech*, London, 1721, 4to.—*Memorial of the Contractants with Mr. Aislabie in a Letter to Lixinius Stolo*, London, 1721, 8vo. H. R. T.

ALBA FIRMA. The term applied to rents reserved by the crown in silver, or white money, as opposed to rents reserved and payable in kind. 2 Coke's *Institutes*, 19. J. E. C. M.

ALCAVALA. A tax formerly charged in Spain and its colonies on all sales of property. The name, of Moorish origin, had existed from very early times; we possess documents of the 12th and 13th centuries in which it occurs; but it appears to have been then applied to a species of seigniorial due, or, perhaps, sometimes to a tax levied to meet a special emergency and confined to certain places. Alfonso XI., 1342, imposed it on the whole of Castile and Leon, his object being to procure money for the war with the Moors. At first only temporary, the cortes of Burgos, 1377, granted it to Henry II. without limitation of time. It was a duty, originally of 10, afterwards of 14 per cent on the selling price of every sort of property, whether movable or immovable, chargeable as often as the property was sold. In Adam Smith's time it had been reduced to 6 per cent. It continued to exist down to the invasion of Spain by Napoleon, except in Catalonia and Arragon, those provinces having purchased exemption from Philip V. It violated the fourth of Smith's canons of taxation, taking and keeping out of the pockets of the people more than it brought into the treasury of the state. It was, besides, a great annoyance to manufacturers, merchants, and shopkeepers who, for the purpose of its collection, were subjected to the continual surveillance of the tax-gatherers. Ustariz attributes to it the ruin of the manufactures of Spain; he might, says Smith, have imputed to it also the decline of agriculture, as it was imposed not only on manufactures, but on the rude produce of the land.

[Colmeiro, *Historia de la Economia Politica en España*, vol. ii. p. 550; Smith, *Wealth of Nations*, bk. v. ch. ii.] J. K. I.

ALCOCK, Rev. Thomas, was born in 1709, and died in 1798. He graduated M.A. at Oxford (Brasenose Coll.) in 1741. He was presented to the vicarage of Runcorn in Cheshire, and printed some small pieces, besides the following ably written pamphlets:—*Observations on the Defects of the Poor Laws, and on the causes and consequences of the great increase and burden of the Poor*, London, 1752, 8vo (an attack upon compulsory provision).—*Remarks on two Bills for the Better Maintenance of the Poor*, London, 1752, 8vo.—*Observations on that part of a late Act of Parliament which lays an Additional Duty on Cyder and Perry*, Plymouth, 1764, 8vo. (The duty of 4s. per hhd. on cider imposed in 1763 was repealed in 1766.) H. R. T.

ALEATORY (derived from the Latin *alea*, a die) means uncertain, risky. The more uncertain any prospective advantage appears, the less *ceteris paribus* will be given for the chance of obtaining it. In other words a greater risk must be compensated by a prospect of greater gain, the purchase-money being the same. Thus £100 stock bearing a fixed interest, say £3 per cent, will fetch a lower price the less safe the security is. A person investing a certain sum of money, say £100, will expect a higher interest according as the investment is more speculative. It must not be supposed that the diminution of value due to uncertainty admits of being determined by any actuarial calculation of probabilities. For the depreciation depends not so much on the real uncertainty as on the purchasers' estimate of the risk. On the one hand, as Prof. Sidgwick points out (*Principles of Political Economy*, bk. ii. ch. vi. § 2), "ignorant, rash, and credulous persons investing in novel undertakings are believed to get, on the average, considerably less interest than if they had lent their capital on perfectly good security." On the other hand "there may be and often is something to be allowed as a charge on account of uncertainty" . . . considered as "an evil in itself." . . . A railway stock that is certain to pay 4 per cent will sell for a higher price than one which is equally likely to pay 1 or 7 per cent, or any intermediate amount" (Prof. Marshall, *Principles of Economics*, bk. vi. ch. vi. § 5). Similar principles apply to the influence of risk upon the remuneration of different occupations. Adam Smith's remarks upon the "natural confidence which every man has more or less not only in his own abilities, but in his own good fortune" (*Wealth of Nations*, bk. i. ch. x.), do not require to be quoted. Prof. Marshall thinks that "in the large majority of cases the influence of risk is in the opposite direction" (*loc. cit.*), tending to increase the remuneration by an amount greater than the insurance against risk.

For a fuller discussion see Probability and Risk as an Element of Cost of Production. F. Y. E.

ALE-TASTER. This was the title of an officer formerly appointed under the Assize of Bread and ale (1267) to inspect the quality and regulate the sale of those commodities in every borough and manor. In some parts of England the office still survives, but its functions have become purely formal. R. L.

ALGAROTTI, Francis, born at Venice 1712, died at Pisa 1764. He was learned and very witty, and owes his reputation to his literary merits and his long personal intercourse and friendship with Frederick II. of Prussia, who ordered a monument to be erected at Pisa to his memory with the epitaph:

Algarotto . Ovidii . Aemulo
Newtoni . Discipulo
Fridericus . Magnus

He was a great admirer of English science, English literature, and English political institutions. As an economist he wrote but little—*An Essay on Commerce* and a short pamphlet on the advantages of developing Africa commercially rather than Asia or America. This little tract contained an idea which was utilised thirty years later by the African Company, directed by Sir Joseph Banks, at whose expense the famous traveller Mungo Park undertook his expedition. M. P.

ALIENI JURIS. Persons are *alieni juris* if they are not fully capable of binding themselves by contract or to alienate property, alienable in itself, *e.g.* infants and married women. They are opposed to persons *sui juris*. E. S.

ALIENS. The subjects or citizens of a foreign state. The disabilities of aliens have in England been almost entirely removed. Up to the year 1870, aliens were unable to acquire any land either by descent or purchase, and even natural-born subjects could not make a title to land by descent from alien ancestors. The only disqualification which still remains, as regards the ownership of property, arises from the rule of law that no alien may be owner or part owner of a British ship.

An alien *enemy*, though he can make a valid contract in England, has, during the continuance of the war, no right to enforce it by action, and if the war lasts long enough his claim may thus be barred by the Statute of Limitation. An alien cannot be a member of either house of parliament, and has no parliamentary vote; on the other hand he has the privilege of serving on juries if he has resided in England or Wales for upwards of ten years. An alien involved in civil or criminal litigation in England was up to the year 1870 entitled to a jury "de medietate linguæ"—*i.e.* a jury one half of which was composed of foreign subjects.

An alien may become a British subject by naturalisation, either by special act of parlia-

ment or by a certificate of the Secretary of State. The law as to NATURALISATION is at present regulated by the British Nationality and Status of Aliens Act, 1914. A candidate for naturalisation must have resided in His Majesty's Dominions for at least five years (of which not less than one year immediately preceding the application must have been spent in the United Kingdom) or served under the crown for at least five years, and must declare his intention to reside in His Majesty's Dominions or to take service under the crown. His certificate is now valid throughout the Empire. E. S.

ALISON, SIR ARCHIBALD, first baronet, son of Rev. A. Alison (born 1792, died 1867), was educated at Edinburgh University. A paper written by him in reply to MALTHUS determined his profession as a lawyer. Alison was called to the Scottish bar December 1814, and appointed advocate-depute in 1822. He travelled on the Continent, wrote much in *Blackwood*, was made Sheriff of Lanarkshire in 1834, and published his voluminous *History of Europe* (1789-1852), full of economical reflections, some biographies, an autobiography, and other works. The Act restricting the paper currency, the Reform of 1832, and the abolition of the corn laws were his special abominations. Few, if any, writers have insisted with more vehemence on the advantages of an increased production of the precious metals than Alison (*History of Europe*, ch. i. §§ 33-40, 1851-52). It was to the decrease in the supply of gold and silver and to the shrinkage in the circulatory medium thus caused, that he ascribes the decline and fall of the Roman Empire. Hence it was natural that Alison should entirely approve of the SUSPENSION of SPECIE PAYMENTS in this country carried out in 1797, and the substitution of a paper currency during the severe struggle of the early years of last century (see Walker, *Money*, pp. 81-83, 349, 350, New York, 1883). He wrote:

The Principles of Population and their Connection with Human Happiness, Edinburgh, 1840, 2 vols. 8vo (dull and wordy; the relations between population and subsistence are elaborately set forth).—*Free Trade and Protection, being a Tract on the Necessity of Agricultural Protection*, Edinburgh, 1844, 8vo.—*England in 1815 and 1845, or a Sufficient and Contracted Currency*, Edinburgh, 1845 (4th ed. 1847).—*Free Trade and a Fettered Currency*, Edinburgh, 1847, 8vo.—*Essays*, Edinburgh, 1850, 3 vols. 8vo (many economical).

H. R. T.

ALISON, WILLIAM PULTENEY, M.D., professor of the practice of medicine in Edinburgh, brother of the historian, is best known by his *Observations on the Management of the Poor in Scotland*, 1840 (see Carlyle's *Past and Present*), and his *Remarks on the Report of the Commissioners on the Poor Laws of Scotland*, 1844. He gives extracts from the evidence, drawing special attention to the unemployed. In opposition to T. CHALMERS, and indeed to the Report itself, he pleads for an extension of legal relief. He wrote a dissertation on the *Reclamation of Waste Lands* (1850), in which he suggests this as a proper field of employment for convicts and paupers. J. B.

ALLMEND. See AGRICULTURAL COMMUNITY.

ALLONGE. A slip of paper fastened to a bill of exchange to receive indorsements for which there is not space on the bill itself; "as a protection against fraud, and in compliance with the provisions of some of the foreign codes, the first of the indorsements in connection with it is sometimes so made that it begins on the bill and ends on the allonge. There is no legal limit to the number of indorsements."

[Hutchison, *The Practice of Banking*, vol. i. p. 188.]

ALLOTMENT.* A small portion of land cultivated by a person in his leisure hours. There is ample evidence to show that previous to the Tudor period the labourer and the artisan had usually a piece of ground attached to their homes. A series of economic changes and the policy of the land system gradually resulted in the separation of the labourers from the soil (see Cliffe LESLIE'S *Land Systems of Ireland, England, and the Continent*, London, 1871; Nasse's *Land Community of the Middle Ages*, London, 1871; Rogers' *Six Centuries of Work and Wages*, London, 1884). An attempt to check this movement was made by the 31 Eliz. c. 7, which prohibited the building of any cottage without an allotment of four acres. This act was repealed in 1775, but long before its repeal it was totally ignored in practice (Gilbert Slater, D.Sc., *The Commonweal*, London, February 1924.) The inclosure acts of the 18th century deprived many labourers of their land, though the advantages of allotments were recognised, in 1795, by a select committee of the House of Commons. The Select Vestry Act 1819 empowered the churchwardens and overseers of a parish to let land to industrious inhabitants, and the 1 & 2 Will. IV. c. 42; 1 & 2 Will. IV. c. 59; and 2 Will. IV. c. 42 contained similar provisions. The Allotments Committee of the House of Commons in 1843 recognised the importance of allotments, but the Women's and Children's employment committee of 1868 reported that but sparing use had been made of the facilities granted by the legislature. The total number of separate detached allotments under one acre existing in 1890 was 455,005. The number of other small holdings up to 50 acres was 409,422 (see *Return of Allotments and Small Holdings*, 1890, c. 6144).

In 1887 an act (50 & 51 Vict. c. 48) was passed which empowered a sanitary authority on the petition of six ratepayers to purchase land for allotments not exceeding one acre each. If the land could not be obtained by agreement, the

county council might authorise its being taken compulsorily, the price being determined by arbitration. All the conditions of tenancy were to be fixed by the local authority, but no building other than a toolhouse, shed, greenhouse, fowlhouse, or pigsty could be erected on the land. The act restricted the provision of allotments to persons belonging to the labouring population resident in the district or parish of the sanitary authority, and the principle underlying the act was that all the expenses of the authority providing the allotments, except the making of public roads, should be recouped out of the rents to be charged for the allotments. J.E.C.M.; E.L.M.

ALLOWANCE (TARE, or difference between GROSS AND NET). A commercial term signifying the deduction made from the gross weight of the goods, either to represent the weight of the package or refuse, or a particular deduction established by custom of certain trades, districts, or countries. *Tare* has been more especially described as the allowance for the weight of the box or package, or the cart or waggon in which the goods are conveyed; and *tret* as an allowance for waste, but the former is the word more generally in use; and gross weight and net weight, live weight and dead weight, and *allowance* in converting from one to the other, are business terms commonly understood. One instance of *allowance* will suffice. The coal merchant receives from the colliery 21 cwts. of coal from the pit for every ton purchased by him, while he sells to the consumer but 20 cwts. The difference is the allowance, or tare, to cover waste in transhipment, cartage, and screening. In many other industries similar allowances are made.

ALLOWANCE SYSTEM. The allowance system was a conspicuous feature in the administration of the poor law at the very end of the 18th and beginning of the 19th century. It was a form of out-door relief (see POOR LAW), and may be defined as relief given to those employed by individuals at the average wages of a district. It was thus, in effect, an attempt on the part of the state to regulate wages, and its history gives an illustration of the results which political economy leads us to expect from such interference. It is not too much to say that in the brief space of forty years, the allowance system sent large areas of land out of cultivation, forced capital into less profitable employments, and caused a demoralisation from which the labourers in some rural districts have not yet recovered. The very class which it was designed to benefit has suffered most from its action.

It originated with the administrative authority, viz. the justices of the peace. These derived or assumed their powers under 5 Eliz. c. 4, which authorised them to fix wages, taken in connection with 3 & 4 W. and M. c. 11, and 9 Geo. I. c. 7, which empowered them to order and direct relief. The system in practice dates from 6th May 1795, when the Berkshire justices resolved to make up by relief from the rates the difference between actual wages and what, in their judgment, was a minimum or "fair" rate for the county. In fixing this last, the price of bread and the size of the family were to be taken into account, *e.g.* when bread was at 1s. 8d. the gallon, a single man was to receive in all 4s. 6d., a man and wife 6s. 8d., man, wife and five children 17s. 6d. This resolution is often called the "Speenhamland Act," from the place of meeting of the justices, and the scale drawn up for Berkshire was used as a model by most of the southern counties. It may be doubted how far such action was even legal, as, by 9 Geo. I. c. 7, relief had been prohibited to those who refused to accept it in a workhouse; but it was supported by public opinion, and confirmed in principle the next year by 36 Geo. III. c. 23, which repealed the prohibitory clauses of 9 Geo. I. c. 7, and empowered justices to order relief to any industrious poor person at his own house or home.

The effects of the system were soon seen. Within forty years of the passing of 36 Geo. III. c. 23 it seemed probable that rents would cease altogether to be paid, and in one parish, Cholesbury, Bucks, the rates had actually swallowed up the rental. Where the leasehold system threw the burden temporarily on the occupier, no solvent tenants were forthcoming owing to uncertainty as to the amount which they might be called upon to pay, for in some cases the rates increased threefold in twenty years. In several counties (*e.g.* Kent, Cambridgeshire, Leicestershire) rent was gradually but surely disappearing.

It might seem, at first sight, as if profits would be raised by a system which forced non-employers to contribute to the wages of labour. But in agriculture any such advantage was more than counterbalanced by an increase in the cost of labour, due to its diminished efficiency. The motive to industry being removed when the reward of the labourer no longer depended on his exertions, industry itself disappeared. In manufactures, on the other hand, where piece-work was generally adopted, a closer supervision exercised, and a larger proportion of non-employers liable to the poor-rate, the system increased profits largely.

Both in agriculture and in manufactures the wages of labour were lowered, partly by the great diminution of efficiency, partly by the increase of population which was stimulated under a system which placed the married man with a family in a better position than the single man, and the mother of illegitimate children than the honest woman, partly, again, because employers were deterred from employing non-paupers by the consideration that they were thus reducing their neighbours' labour bill. More important still was the moral effect of the

system upon the labourers. Industry and prudential foresight were extinguished when the possession of property was a bar to employment, and the position of the thriftless was made an object of envy to the careful: parental responsibility, filial obligation and affection were discouraged; drunkenness, vice, and crime grew apace; and the deterioration of a large part of the labouring population in the districts in which the system was adopted became matter of common knowledge. Had it continued in force but a few years longer the whole social fabric must have crumbled away. The relations between employer and employed were embittered to an extent which showed itself in constant riots; in the southern counties the labourers established a reign of terror. Meanwhile the production of wealth fell off as the rates rose, population grew apace, and civilisation went backwards.

Allowances in aid of wages were gradually abolished as regards men, by the orders of the poor-law board restricting or prohibiting outdoor relief to the able-bodied. It may, however, be questioned whether the same results are not now produced in the case of women by a loose administration of the law.

[For a full account of the allowance system, see Poor-Law Commissioners' First Report, 1834 (reprinted by order of House of Commons, 1885). —Nicholls, *Hist. of the English Poor Law.*— Eden's *State of the Poor.*—Fowle, *The Poor Law* (Macmillan; English Citizen Series).] L. R. P.

[The following statement, taken from the obituary notice of the Rev. Henry Playsted Jeston, late perpetual curate of Cholesbury, Bucks, in the *Guardian* newspaper of 3d July 1889, gives a vivid picture of the effects of the allowance system under the old poor laws.

"In 1830 the parish (Cholesbury), under the old poor law, was on the verge of bankruptcy. In 1831, out of 98 who had a settlement in the parish (the total population being then 127, and in 1881 being 99), there were no less than 64 in receipt of relief, and the poor-rates alone exceeded 24s. in the pound. As the result, the glebe, as well as all the land in the parish save some sixteen acres, was thrown out of cultivation, and the parish had to exist for some time by means of rates in aid levied on other parishes in the hundred. This state of affairs, together with a series of letters which Mr. Jeston wrote to the *Times*, and his evidence before the poor-law commission, had a considerable share in bringing on the present poor law. Before his death Mr. Jeston saw his parishioners in a fairly prosperous condition, not one of them being in receipt of relief from the rates."]

ALLOY. With regard to the derivation of the word "alloy" it may be sufficient to point out that the old French *alei* was retained in the Norman as *alai* or *allai*, whence our word "allay." Through the erroneous fancy that the French *aloi* was equivalent to *à loi* (to law), the word meaning originally simple "combination union" came to be used specially of the mixing baser metal with gold and silver in coin so as to bring it to the recognised standard, and hence of the standard itself. The French word comes from *alleium* or *alaium*, the original being probably *adligo* (*allego*), to bind to.

The meaning of the word alloy in mint language is different from that ordinarily accepted in scientific phraseology, as it is applied to the base metal added to a more precious one, and not to the mass—which may be either molten or solidified—of the mixed metals.

The reasons for the use of alloys for the coinage in preference to pure metals are somewhat complex, and many conditions have to be taken into consideration in choosing the base metal to be added to the precious metal. The resulting alloy must be of good colour, must be ductile, and must not exhibit any traces of brittleness. In the case of gold, silver forms a very ductile alloy, but then it sensibly lowers the colour of the gold. Copper, on the other hand, heightens the tint and has the advantage of yielding a durable as well as ductile alloy. A triple alloy of gold, silver, and copper may be made of delicate tints, but a triple alloy is difficult to assay, and it is undesirable to complicate the accounts of a mint by the use of two precious metals and a base one in the same alloy, therefore a single base metal—copper—is almost universally used.

It has long been known that the union of two or more metals produces a result which often differs more in physical properties from either of its constituents than these do from each other. Copper and tin, for instance, yield alloys of a wide range of properties and there is hardly any fact more remarkable in the whole range of metallurgy than the enormous influence exerted on a large mass of metal by a small quantity of another metal or metalloid.

The properties which are found the most desirable to be secured are:—(1) ductility; (2) durability; (3) uniformity of composition.

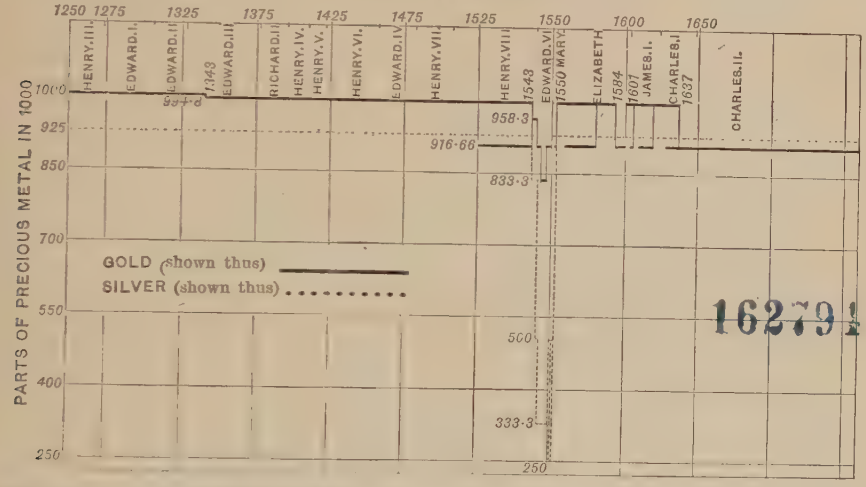
The alloys actually used for coinage even at the present time are numerous, and looking back over the numismatic history of the world, endless combinations of the precious and base metals will be found to have been used. Pure gold and silver have been used, either singly or alloyed with each other, or alloyed with copper, the latter metal in turn being sometimes employed with only infinitesimal additions of precious metal.

In the case of both the gold and silver currency of this country the adjustment of the relative proportions of the precious and the base metals was undoubtedly guided by the particular systems of weights used. To take the silver coinage first, the fineness of alloys of this metal was until the year 1905 computed by divisions of the troy POUND, and the troy ounce is still retained in weighing

gold and silver. The computation of the standard fineness for alloys of gold is based on the singular "carat" system of weights, the origin of which is popularly believed to have been derived from the weight of an oriental plant seed. It appears more probable, however, that it came from the "*Keration*," a small Greek weight (see also PERIOT).

The standard of fineness of the alloy used at the present time for the British gold coinage is 22 carats, or 916·66 parts in 1000 of pure gold; that for the silver coinage is 500 parts pure silver.

The accompanying table shows the variations in the standard of fineness from the reign of Henry III. to the year 1919. The coins in circulation in France from the beginning of the 17th to the end of the 18th century varied in fineness from 900 to 982. When, however, the decimal system of weights and measures was fairly established, coins were issued in conformity with it. The law of the 28th Thermidor, an. iii. (1796), enacted that the standard fineness of the silver coins should be 900, and eight years later a law prescribed the coinage of gold pieces of twenty francs, the standard of which was also 900. A subsequent law lowered the standard fineness of the subsidiary silver coins to 835. By the Monetary Convention of 1865 concluded between France,



Belgium, Italy, and Switzerland these standards of fineness were adhered to, and several other countries have adopted the same monetary system. In Germany the standard fineness of both gold and silver has been fixed at 900, and the same standard has been adopted in the United States for both metals.

It will be evident, from the table as well as from the foregoing remarks, that the two really important alloys used for the coinage of gold have respectively the standard fineness of 916·6 and 900. For silver the standard 900 was more widely used than any other before 1914, England alone employing 925, which maintained the connection with Saxon coins. C. R-A.; T. K. R.

ALOD, ALODIAL LAND. When the German tribes overran Europe in the 5th century, they distributed among themselves the conquered lands. In England, owing to the displacement of the conquered population, this distribution was probably more complete than elsewhere. Each township or village received an allotment of land, the surplus being the FOLKLAND, or property of the tribe. Within the village a further distribution took place among the free heads of households, each of whom had a homestead as private property, while the arable and pasture land remained for some time in common occupation, being annually distributed for the harvest, whether of hay or corn. Land which was held in separate ownership was called *ethel* or *alod*. The derivation of the latter word is disputed, but it is probably connected with lot, and thus expresses the original method of distribution. In the 11th century we find the term applied in England to all land held independently, without rent or service to a superior. It thus included both the original *ethel*, and also BOCLAND, or private estates carved out of the *folkland* for the benefit of individuals. After the Norman Conquest alodial land ceased to exist, owing to the general introduction of feudal or conditional tenure.

[See Stubbs, *Constitutional History*, vol. i. ch. v.—Kemble, *Saxons in England*.—Freeman, *Norman Conquest*, vol. i.] R. L.

ALTERNATIVE STANDARD. It has been urged by monometallists that a STANDARD OF VALUE formed of two metals is not really a double, but only an alternative standard, debtors, where payment is permitted in either metal, naturally electing to use the cheaper

in discharge of their obligations. Jevons says on this subject, referring to the countries included in the Latin union—"When silver is lower in price than 5s. $0\frac{1}{10}$d. per ounce, silver becomes the standard; when silver rises above this price, gold takes its place as the real measure of value. So far the English economists are no doubt correct; but, in the first place, it does not follow that the prices of commodities follow the extreme fluctuations of value of both metals, as many writers have inconsiderately declared. Prices only depend upon the course of the metal which happens to have sunk in value below the legal ratio of $15\frac{1}{2}$ to 1. . . . At any moment the standard of value is doubtless one metal or the other, and not both; yet the fact that there is an alternation tends to make each vary much less than it would otherwise do. It cannot prevent both metals from falling or rising in value compared with other commodities, but it can throw variations of supply and demand over a larger area, instead of leaving each metal to be affected merely by its own accidents." *Money*, by Prof. W. S. Jevons, pp. 137-140.

It is alleged, on the other side. (1) That the currency may indeed alternate, in greater or less degree, under the influence of a difference of ratio in another bimetallic country; but that this does not affect the standard, nor the public right under a bimetallic law to have either metal coined at the legal ratio, and to pay one's debts in either at one's own choice.

(2) That, as to internal action, no one has yet shown how the debtor can obtain one metal at a "cheaper" rate than the other, inasmuch as it is inconceivable that the seller, who can get silver coined into a fixed number of francs or shillings at the mint, would be content to take a smaller number from any one else.

(3) That, as to external action, though it were true, which bimetallists maintain it never was, that either metal was wholly absent from the circulation, yet the effect of the law on monometallic countries would, and always did remain intact, the open mint, and the right of sending either metal to be coined into the current money of the bimetallic state, making it impossible that the metal so sent could materially fall in price in the monometallic state remitting it; because such remittance must always be realisable at the rate of exchange current between the two states; and that accordingly the price (of silver, for example) in the English market, neither did nor could fall below 5s. $0\frac{1}{10}$d., except so far as it might be modified by the current rate of exchange.

(4) That, consequently, a par of exchange was established and maintained between all silver- and gold-using countries. (See Bimetallism; Guinea, Rating of; Standard of Value). These are the contentions on both sides.

[The difficulties experienced in keeping two metals in circulation are described in Sir I. Newton's three reports "Representations on the Subject of Money," 1711-1712, 1717. Private reprint of *Tracts on Money*, collected by J. R. M'Culloch (London, 1856), pp. 269-279. The two principal of these reports are also reprinted in *Report and Proceedings International Monetary Conference*, 1878 (Washington, 1879), pp. 317-321.—Also *Investigations on Currency and Finance*, Prof. W. S. Jevons.]

ALTHUSIUS, Johannes (1557-1638), a German writer, born at Diedenshausen (Witgenstein-Berleburg). He is said to have studied at Geneva under the influence of Calvinistic teachers. In 1586 he became professor of law and ethics at Herborn (Nassau), and in 1604 syndic of the free town of Emden. This honour was conferred upon him on account of his treatise on politics; in his new position he struggled successfully against the pretensions of the nobility and the count of Eastern Friesland. He died at Emden in 1638. His *Politica* is the first systematic treatise on that subject written in Germany; he regards politics as the art of constituting social life—"symbiotic art." The foundation of the organisation of "social life" is an express or tacit contract between associated men. As all rights therefore proceed from the people, they have the right of resistance against usurpations of authority. "Even if the people would like to do so, they could not transfer or alienate the sovereign power to any one else, just as no one can give to another the physical life he himself has." In consequence of these opinions Althusius has been ranked among the "monarchomachic school" (George Buchanan, 1579, Languet, 1579; Boucher, 1591; G. Rossaeus, 1590; Hotomannus, 1573; Mariana, 1599; Althusius, and John Milton, 1651), and was assailed by H. Arnisaeus, *De autoritate principum*, 1611; Grotius, *De jure belli ac pacis*, 1625, I. ch. iii. § 8; Conring, *De auctoribus politicis*, and Boecler, *Institutiones polit.*, Argentor, 1674, II. ch. i. p. 102. Though forgotten in the latter half of the 17th century, this work seems to have had considerable influence upon the formation of the political ideas of Rousseau (compare Gierke, p. 201). The social and economical ideas contained in it are remarkable. It analyses the historic forms of political associations in the order of formation, and distinguishes between associations for the realisation of private common interests ("peculiare commune"), both natural (the family) and civil (corporations), and associations for public interests (the "politeuma") both particular (parish, town, province) and universal (the state). In the latter resides the supreme power, controlled, however, by ephori, and exercised by supreme "magistratus," whose creation is effected by a contract; and the different forms of government

are only as many species of supreme magistrates, be they monarchical or polyarchical.

The views held by Althusius on economic policy and in respect of which he follows BOTERO, are contained in the 32d chapter (*De administratione mediorum ad vitæ socialis commoditates necessariorum*). Trade enriches, as is shown by the example of Venice and Genoa, the sovereign and the people. Therefore the sovereign must procure a steady supply of all things needed for the public weal, secure the public from enhancement of prices, prevent the importation of dangerous or immoral commodities, and the exportation of provisions. The establishment of staples and the maintenance of GILD regulations are recommended by Althusius, but monopolies should only be allowed in case private means are not sufficient or security is wanting. Among monopolies he reckons combinations of artisans. His definition of monopolies has been quoted by Edw. MISSELDEN, *Free Trade, or, the Meanes to make Trade florish*, 1622, ch. iii. p. 59.

Politica methodice Digesta, Herbornæ, 1603, 2d ed., Groningæ, 1610; 3d ed., Arnheim, 1617; 8th and last ed., Herbornæ, 1654. His other works are: *Jurisprudentia Romana*, Herbornæ, 1588; *Dicæologicæ libri tres totum et universum jus, quo utimur, methodice complectentes*, Herbornæ, 1617; Francofurti, 1618.—See Otto Gierke, *Johannes Althusius und die Entwicklung der naturrechtlichen Staatstheorien*, Breslau, 1880, and Friedrich Althaus, *Theodor Althaus, ein Lebensbild*, Bonn, 1888. S. B.

ALTRUISM. Altruism is an ethical term which is often used in economic discussions on SOCIALISM, LAISSEZ-FAIRE, the functions of government, and generally questions of distribution. Altruism is the opposite of individualism or egoism, and embraces those moral motives which induce a man to regard the interests of others. Most English economists have written with the "regulative idea" that self-interest should at least provisionally and hypothetically be regarded as the mainspring of economic activity. In recent times, however, the tendency, especially under German influences, has been to give more weight to altruistic impulses.

[Compare Dr. Sidgwick's *Principles of Political Economy*, bk. iii. ch. ii.—and Prof. Marshall, *Principles of Economics*, bk. i. ch. vi.] J. S. N.

AMANA SOCIETY, THE, a communistic society and religious sect (*Wahre Inspirations Gemeinden*), consisting of Germans, established at Amana, Iowa Co., Iowa, U.S.A. More than a century after its foundation in Germany the sect, in 1843, emigrated to Ebenezer near Buffalo, and there adopted communism. The society thus formed eventually removed to Amana, where it still (1890) exists (see COMMUNISM). E. C.

AMERCEMENTS. The mediæval history of pecuniary penalties possesses an economical as well as a legal interest. Even in the royal courts of justice the decision of criminal or civil causes was not the sole object aimed at. For it was also the duty of the court to assess and account for the various fines and amercements found to be leviable in the course of the sitting. These payments form a regular portion of the issues of the County, and are duly accounted for by the sheriff at the exchequer. Their amount was limited by the clause of the Great Charter declaring that no free man shall be amerced except according to the measure of his offence, and protecting from seizure the freeman's house and household goods and the villein's wainage. The local seigneurial jurisdictions imitated the royal courts in making a free use of pecuniary penalties, but there is reason to believe that the amercements inflicted by them were of a far more extortionate character. The clause in Magna Charta gave little or no protection to the VILLEIN, and the STEWARD or REEVE who presided in these local courts, naturally found their chief interest in raising as much money as possible by way of "profits of the court," a regular item in manorial accounts. A glance through Prof. Maitland's *Select Pleas in Manorial Courts* brings out the fact that the regular punishment for manorial offences, such as bad ploughing, or not coming to wash the lord's sheep, was an amercement, amounting in some cases to a tax of 6s. 8d. on the township. Besides this, fines were levied for breaking the ASSIZE OF BEER, for trespassing on the lord's wood, for fighting, and for a large number of other reasons. The amount of these must frequently have been burdensome. The oppressive reeve is expressly reproved in the *Ayenbit of Inwyt* (written 1340); in his *Parson's Tale* Chaucer devotes a long passage to the blame of extortionate amercements; and the same tone can be noticed in *Piers Ploughman*, passus ix. (C. text) and in Wyclif's writings.

[*Select Pleas in Manorial Courts*, vol. i., edited for the Selden Society by F. W. Maitland, 1889. —Chaucer's *Canterbury Pilgrims; The Parson's Tale*, 1386. *The Vision of Piers Ploughman*, text C. passus ix. 1393, Early English Text Society. —*Unpublished English Works of Wyclif*, Early English Text Society, 1880.] C. G. C.

AMERICAN SCHOOL OF POLITICAL ECONOMY.* Strictly speaking, an American school of political economy has not yet arisen, but two movements are sometimes referred to under that title: (1) In the strong protective agitation which began in the United States about 1820, the name "American system" was applied to the general policy of developing the resources of the country by high import duties on the one hand, and by extensive internal improvements on the other. But the phrase obviously points to an episode in political history rather than to a movement in political economy. The best advocacy of this American system is to be found in the speech of Henry

CLAY on the tariff, made in 1824, easily to be found in the various editions of his writings. (2) With more propriety, the term American school may be applied to the doctrines of HENRY C. CAREY (*q.v.*) and his followers. The rejection of the Ricardian doctrine of rent and of the Malthusian theory, the general optimism, the reference of value in all instances to cost of production, the advocacy of protection, are easily seen to be connected with the conditions of a new country possessed of abundant fertile land, rapidly increasing in population and wealth, confronted as yet by few of the difficulties that beset older communities, constantly varying and developing its industries as time passes on. Carey's doctrines in this sense are American; and are the most distinctively national contribution which the United States has yet made to economic literature. Among his followers are :

Erasmus Peshine Smith, *A Manual of Political Economy*, Philadelphia, 1852, and later editions.—William Elder, *Questions of the Day*, Philadelphia, 1871.—Robert Ellis Thompson, *Social Science and National Economy*, Philadelphia, 1875, and later editions; *Protection to Home Industry*, New York, 1886.—W. D. Kelley, *Speeches, Letters, and Addresses*, Philadelphia, 1872. F. W. T.

Among other writers of great ability space only allows us to name, C. F. ADAMS, J. DAVIDSON, C. F. DUNBAR, F. A. WALKER, D. A. WELLS, H. C. Adams, J. B. Clark, D. R. Dewey, R. T. Ely, C. Gross, A. T. Hadley, J. W. Jenks, S. N. Patten, E. R. A. Seligman, and F. W. Taussig.

AMORTISATION, or AMORTIZATION. The financial signification of amortisation is the redemption, reimbursement, liquidation, or repayment of debt generally, and the term is often applied in connection with the sinking funds of mortgages and debentures. Thus, in the recent rearrangement of the Venezuelan debt we read, "the surplus applicable, after covering the interest, to amortisation shall be applied half-yearly," etc., and in the instance of one of the Buenos Ayres loans—"the government have the power to at any period increase the amount of the amortisation." But the word is much more often used in French finance. Thus M. Waddington wrote to Messrs. Rothschild on 28th October 1878, "nous déclinons toute responsabilité rélativement au paiement de l'intérêt et de l'amortissement de l'emprunt projeté." The French expressions "fonds d'amortissement" (sinking funds) and "caisse d'amortissement" (sinking fund office) are in common use. But here, in the sense of the amortisation of loans, the operation can be treated more in detail under the head of SINKING FUND (*q.v.*)

In law amortisation signifies the transfer of lands to a corporation, GILD, or charitable body in perpetuity, or in other words, an alienation in mortmain. The laws in force restricting such amortisation of property in perpetuity are recounted under MORTMAIN (*q.v.*)

AMSTERDAM, BANK OF. See BANKS, EARLY EUROPEAN.

ANALYTICAL METHOD. We employ an analytical method in science when we commence with particular facts, and, by analysing them, discover the laws in operation, thus working up to general principles; we employ a SYNTHETIC METHOD when we commence with general principles, known or assumed, and combine them so as to obtain conclusions that serve to explain particular facts. In the one case, we proceed from the individual to the universal; in the other, from the universal to the individual. In political economy one of the main controversies as to method turns on this distinction. It is maintained, on the one hand, that our starting-point should be the analysis of complex industrial phenomena; it is affirmed, on the other hand, that the science should be constructed by deductive reasoning from elementary laws of human nature.

In reality the contrast here indicated is far too sharply drawn. A true economic science can be built up only by a method of combined analysis and synthesis. The former without the latter would yield merely empirical results of uncertain validity, and disconnected with one another. The latter without the former would yield results always hypothetical, and sometimes entirely remote from the actual facts of the economic world. Hence the synthetical method is required to rationalise and systematise conclusions gained by the method of analysis, and the analytical method is in its turn required to guide and give reality to the synthetical. It may be said that upon this point, thus broadly stated, economists are, generally speaking, coming to agreement. At the same time, some difference of opinion is always likely to remain in regard to the relative importance of the two methods in economic science, and the extent to which, at different stages of inquiry, each should in its turn be subordinated to the other. In the last resort, some latitude must be left to the natural intellectual bias of the individual investigator. For further discussion of this question, see DEDUCTIVE METHOD; INDUCTIVE METHOD. J. N. K.

ANARCHISM is the theory held by a party which denies the justice and expediency of both government and property, and tries to overthrow these institutions by violence. At the peace congress of Geneva in 1867, MICHAEL BAKOUNIN (*q.v.*), a Russian exile, advocated the abolition of centralised states, and the substitution of voluntary federations of independent communes. He urged the next congress, held at Berne under the presidency of Victor Hugo in 1868, to declare in favour of socialism, and join the INTERNATIONAL (*q.v.*) Failing to convince the assembly, he formed his supporters into a "Social Democratic Alliance," the aim of which was to make land and capital the collective property of society, and secure that they should be used only by agricultural and manufacturing associations. All existing states were to "dis-

appear in the universal union of free associations." The Alliance desired to be recognised as part of the International, but its claim was rejected, whereupon it dissolved after six months' existence, during which it had been active in Spain and Italy, and its sections joined the International separately. At the beginning of 1869 the groups of the International in French-speaking Switzerland organised themselves as the "Romance Federation." This speedily split into two sections, one of which, under James Guillaume, a disciple of Bakounin, became the "Federation of the Jura." Bakounin, Guillaume, and shortly afterwards the whole Federation, were expelled from the International. The Federation did not acquiesce in its expulsion, but held meetings in 1873, 1874, 1876, and 1877, which professed to be the sixth, seventh, eighth, and ninth general meetings of the International. To its influence Prince Kropotkin, in 1882, ascribed the greater part of the growth of anarchist opinions in France and elsewhere. As early as at the meeting of 1873, Brousse said incidentally "anarchy is your programme," but it was not till five or six years afterwards that the "anarchists" became definitely known by that name, and ceased to rank as collectivists (see COLLECTIVISM). In August 1882, a meeting held at Geneva for the express purpose of making clear "the separation of the anarchist party from all political parties," issued a manifesto which declared the enmity of "anarchists, that is men without chiefs," to all who have, or wish to get power—to the landowner, the capitalist employer, the state, "abstractions of authority," such as God and the Devil, and "the law, always made for the oppression of the weak by the strong." "We declare ourselves allies of every man, group, or society which denies the law by a revolutionary act. We reject all legal methods. . . We spurn the suffrage called universal. . . We wish to remain our own masters. . . Nevertheless we know that individual liberty cannot exist without association with other free comrades. . . . Every social product is a result of collective work to which all are equally entitled. We are therefore communists; we recognise that without the destruction of family, communal, provincial, and national boundaries, the work will always have to be done over again." The idea of making the commune the basis of a social reorganisation was a mere Russian importation (see MIR), which never obtained any hold on western minds, and may have been discredited by the failure of the COMMUNE OF PARIS (*q.v.*) to establish its independence. The "free association," which has taken the place of the commune, has acquired no definite shape. Anarchists are content to believe that every one would behave properly if governments with their forcible methods were abolished. They are not satisfied with watching or even with accelerating the gradual elimination of force which marks the progress of civilisation, but insist on the immediate extinction of force by force.

Bakounin died in 1876; the chief agitators who have carried on his work are Prince Kropotkin, Élisée Reclus, and Émile Gautier in Switzerland and France, and Most, editor of the *Freiheit* newspaper among Germans, first in England, and afterwards in America (see COMMUNISM; SOCIALISM; NIHILISM; PROUDHON).

[J. Garin, *L'Anarchie et les Anarchistes*, 1885.—E. de Laveleye, *Le Socialisme Contemporain*, 3me ed. 1885, ch. ix. x.—Elisée Reclus, "Anarchy" in the *Contemporary Review*, May 1884 (xlv. pp. 627-641, especially 635, 636).—John Rae, *Contemporary Socialism*, 1884.—Prince Kropotkin, "The Scientific Bases of Anarchy," in the *Nineteenth Century*, February 1887 (xxi. pp. 238-252, especially 242).—"The Coming Anarchy," *Ibid.*, August 1887 (xxii. pp. 149-164).—R. T. Ely, *Recent American Socialism* (*Johns Hopkins University Studies*, 3d Series, No. 4), April 1885.—Wm. Godwin's *Political Justice*, 1793, is to a great extent an anticipation of the anarchist theory.] (See also SOCIALISM in App. to Vol. III.) E. C.

ANATOCISMUS. A term employed in the technical language of the civil law for compound interest. The Roman law did not allow compound interest and even prevented a creditor from claiming an accumulation of simple interest in so far as it exceeded the amount of the principal. E. S.

ANDERSON, ADAM, born in Scotland about 1692, was for forty years a clerk in the South Sea House. He died at Clerkenwell, 10th January 1765. His only work was—

An Historical and Chronological Deduction of the Origin of Commerce from the Earliest Accounts to the Present Time, London, 1764, 2 vols. folio (a monument of industry in the form of annals, treating specially of Great Britain and Ireland). A new edition, *carefully revised and continued* (by Wm. Combe), London, 1787-89, 4 vols. 4to. Anderson's text from 1492 to 1760, was incorporated by David MACPHERSON in his *Annals of Commerce*, London, 1805, 4 vols. 4to. H. R. T.

ANDERSON, JAMES, LL.D., born at Hermiston, near Edinburgh, 1739, died at West Ham, Essex, 15th October 1808. A practical farmer, employed by PITT to survey the fisheries, Scottish rural economy owes much to him. Dr. Anderson first propounded the theory of "rent," afterwards rehandled by MALTHUS and RICARDO. In his works, *e.g.* in his *Observations on the National Industry of Scotland* (vol. ii. pp. 208-9, published 1779, but written 1775), he says that rent is a premium for the cultivation of the richer soils, reducing the profits of the cultivators to an equality with those of the cultivators of the poorer.

Such passages show clearly that Anderson had a more correct view of the theory of rent than his greater contemporary and compatriot

ADAM SMITH. Anderson was an indefatigable writer. Apart from editing *The Bee*, Edinburgh, 1790-94, 18 vols. 8vo, and *Recreations in Agriculture, Natural History*, etc., 1799-1802, 6 vols. 8vo, he was himself responsible for a number of works characterised by Marshall as "excellent studies of economic facts." Of these the chief are :—*Inquiry into the Nature of the Corn Laws, with a View to the new Corn Bill proposed for Scotland*, Edinburgh, 1777, 8vo (the earliest explanation of the theory of rent usually called after Ricardo ; see also his *Recreations*, v. 401-28).—*Inquiry into the Causes that have hitherto Retarded the Advancement of Agriculture in Europe*, Edinburgh, 1779, 8vo.—*Account of the Present State of the Hebrides and Western Coasts of Scotland*, Edinburgh, 1785, 8vo.—*Essays Relating to Agriculture and Rural Affairs*, 5th ed., London, 1800, 3 vols. 8vo.—*Investigation of the Circumstances that have led to the Present Scarcity of Grain in Britain*, London, 1801, 8vo (friendly to protection).—See also Bentham's Correspondence (*Works*, x. 127-9, 288). H. R. T.

ANGARIE, DROIT D' (*ἀγγαρεία*, see St. Matthew v. 41). Angarie means in international law the actual impressment of foreign (even neutral) vessels, as distinguished from embargo, which is mere exclusion from the ports. The right was exercised by the Prussians in the war of 1870-71, when they sank six English ships in the Seine. J. B.

ANGEL. English gold coin (Edward IV. to Charles I.) of the following weights, fineness, and value—

Reign.	Year.	Rating.	Weight.	Fineness.	Value in gold 916·6, fine at £3 : 17 : 10½ an oz.
			grains.		
Edward IV.	1466	6s. 8d.	85·25	994·8	15s.
Henry VIII.	1527	7s. 6d.	80	,,	14s. 1d.
,,	1543	8s.	,,	916·6	12s. 11¾d.
Edward VI.	1551	,,	,,	994·8	14s. 1d.
Mary	1553	10s.	,,	,,	,,
Elizabeth	1601	,,	79	,,	13s. 11d.
James I.	1605	,,	71	,,	12s. 6d.
,,	1606	,,	65·5	,,	11s. 6½d.
,,	1610	11s.	,,	,,	,,
,,	1619	,,	64·25	,,	11s. 3¾d.
Charles I.	1627	10s.	,,	,,	,,

F. E. A.

ANNA (British India). One sixteenth of a rupee. Silver coins : 4 and 2 annas, 916·6 fine ; weight 45 and 22½ grains ; value 6½d. and 3¼d., or ·59 fr. and ·30 fr. respectively. Nickel pieces of 4 and 8 annas were introduced in 1919. F. E. A.

ANNATES. This was the first year's revenue of a bishopric or benefice which was paid to the pope in all countries which acknowledged his spiritual headship. It is probable that the practice was not introduced into England until after 1213, when John did homage to the papacy. This and other papal exactions were very unpopular in England, and the clergy themselves petitioned for the abolition of annates, when Henry VIII. quarrelled with the pope about his divorce. A bill for this purpose was passed by parliament in 1532, but Henry postponed his consent, hoping to use it as a means of influencing the Roman court. In 1534, however, the Annates Act became law. Besides prohibiting the payment to Rome, this Act also laid down the regulations for the choice of bishops which are still observed. To the great disappointment of the clergy, the annates, instead of being abolished, were transferred to the crown. Mary surrendered them, but they were restored to the crown under Elizabeth. Ultimately Anne gave them back to the church, in order to subsidise small livings, and the fund still exists under the name of Queen Anne's bounty.

[Perry, *History of the English Church*, 1887, vol. ii.] R. L.

ANNEALING. Most metals and alloys, when submitted to the operations of rolling or wire drawing, lose their malleability or power of being extended. This may be restored by *annealing*, which consists in raising the metal to a high temperature, usually above redness, and allowing it to cool slowly. With some metals it is immaterial whether the cooling from the high temperature takes place rapidly or slowly. Thus certain alloys of copper and tin are rendered most malleable by rapid cooling and the same observation applies to alloys of iron and manganese which contain more than 8 per cent of manganese. In the preparation of steel for industrial use annealing is of great importance, and the particular temperature suitable to each variety of steel has to be determined with great accuracy. The density of rolled metals is generally diminished slightly by annealing. The process is of importance in the coinage of the precious metals (see ALLOY). C. R-A.

ANNUAL RENT (Scotch). Nearly equivalent to rent charge.

ANNUITY. The simplest way in which an annuity can be defined from an economic point of view is to regard it as a payment in one instalment, or in any number of instalments, composed (1) of the sinking fund to redeem or restore the principal or purchase money of the annuity by an investment increasing at interest in geometrical progression ; and (2) of the interest on the principal or purchase money and its unredeemed balances throughout the term of the annuity, such interest decreasing in geometrical progression until the sinking fund replaces the whole of the principal or purchase money. Thus, if an annuity of £100 for one year be bought to pay 3 per cent interest, it is worth £97·0874 purchase money, and the annuity itself is made up :—

(1) Of the present value at 3 per cent interest of the sum of £100, due at the end of one year, or of a sinking fund of . . .	£97·0874
(2) Of the interest at 3 per cent for one year on the £97·0874 purchase money	2·9126
Total annuity . .	£100·0000

The value of each instalment for any term of years for which an annuity is granted, may be similarly calculated; thus, the value at 3 per cent interest of an annuity of £100 per annum to endure in perpetuity or for an infinite number of years, may be stated in the same manner as made up:—

(1) Of the present value of £3333·3333 (or of the purchase money at 3 per cent of a perpetual annuity of £100) redeemable at the end of an infinite number of years	£000·0000
(2) Of the annual interest at 3 per cent upon the £3333·3333 purchase money . . .	100·0000
Total annuity . .	£100·0000

In any scheme of taxation which deducts a percentage, or so much in the pound, upon the whole or gross amount of an annuity, without distinguishing between what part of it is sinking fund and what part interest, the result is that the fiscal burden infringes on property as well as on income, although in ordinary language this common mode of procedure is called an income-tax. If it were so purely and truly, it would, in the first of the above examples, make a deduction for tax, not upon the whole £100 of annuity, but upon £2·9126 only, so that the exaction is more than thirty-three times too great. In the second example the tax is rightly levied upon the whole £100 of annuity, as there is no possible existence of a sinking fund where the term the annuity has to run is infinite. It follows that the shorter such term is the greater is the inequity of assessment, and the longer the term the less its inequity. So much has this been felt by those who purchase annuities or rent charges by way of equated payments continuing for a given number of years, that it is not uncommon for purchasers of such annuities, or lenders of money on their security, to contract themselves out of the incidence of the INCOME TAX on that part of the annual payment which represents SINKING FUND. This is done by the annuity or mortgage-deed containing a schedule setting forth in separate columns what is sinking fund and what is interest. Thus, for example, in an annuity of £100 granted for two years and calculated to pay the purchaser 3 per cent, the value or purchase money of this is, by calculation, £191·3470. The schedule runs thus:

Col. 1. Year.	Col. 2. Repayment of Purchase Money.	Col. 3. Interest on Yearly Balance of Purchase Money.	Col. 4. Total Annuity (col. 2+col. 3).
1 . . .	£94·2596	£5·7404	£100·
2 . . .	97·0874	2·9126	100·
Total payments	£191·3470	£8·6530	£200·

By this means income-tax becomes assessable in the two years upon £8·6530 instead of upon £200.

The same methods of analysis of an annuity ceasing at the death of a single life or of the survivor of any number of lives, could be applied so as to distinguish between capital and income, and the sinking fund and interest admit of being similarly separated and defined from the initial year or age at which the life-annuity commences to its ultimate or terminal year, which, in such cases, is the oldest age to which it is possible the life or lives can attain, according to the particular table of mortality on which the annuity is based or valued.

From what has been above stated several important economic conclusions follow—(1) that when a state borrows money by grant or sale of TERMINABLE ANNUITIES ceasing at the expiration of a certain number of years, long or short, and its fiscal system at the same time includes the imposition of what is called an income-tax, such a tax falls upon the whole of the capital out of which the annuity is constituted, and the tax becomes one on property as well as on income; (2) that although the system of borrowing on terminable as compared with that of borrowing on perpetual annuities has been frequently extolled as the more provident and beneficial of the two arrangements, it is really subject to much qualification, as it involves in every instance an obligatory sinking fund, which cannot be suspended, for the repayment of principal. This must continue for the whole of the term of years the annuities have to run, during which the borrower (and few modern states fail to be in that position over many years) is hampered with the prejudicial condition of having to borrow to pay debts, a course generally antagonistic to the principles of sound finance; (3) that as in these terminable annuities the state as borrower repays portions of principal combined with every payment of interest, the state creditor, small as well as great, is, in his turn, compelled to reinvest, periodically and with undeviating regularity, fractions of the principal returned to him, unless he be content to see his capital destroyed. This necessity of re-investment is a troublesome, and sometimes a difficult, task, and has a tendency

towards improvidence on the lender's part, as it exposes him to the temptation of omitting to save the means by which he may restore his capital; (4) the knowledge of these circumstances and the unfair incidence of the income-tax on terminable annuities combine in rendering it impossible, as a general rule, for large state loans to be contracted at as low a rate of interest in terminable annuities as in perpetual annuities. The market price of the former as compared with the latter has in almost every known instance revealed a lower public estimation of the terminable annuity, and it has shown that as the repayment of the principal augments in geometrical proportion with each instalment, the depression of the security grows greater and greater as the annuity approaches nearer and nearer to its terminal period. Out of the total sum of about 585 millions sterling raised by loans in England in 1792-1816, not more than $1\frac{1}{2}$ per cent can be estimated to have been obtained through the employment, as an adjunct to other financial methods, of the terminable annuity system. The remaining $98\frac{1}{2}$ per cent of what in those days was a huge mountain of fresh indebtedness, was raised by perpetual annuities. The terminable, or long annuities as they were called, mostly granted for sixty years, were only floated on terms of market valuation imposing a differential and higher rate of interest on the borrower of at least 1 per cent as compared with the terms for perpetual annuities. The writer of the present article was associated with the late Mr. Newmarch, in 1854-55, in the investigations that served as the basis of the elaborate essay by that economist *On the loans raised by Mr. Pitt during the first French War*, 1793-1801, *with some statements in defence of the methods of funding employed*. London: Effingham Wilson, 1855 (*vide* pp. 29-31). This essay has now become extremely scarce. A short paragraph may be quoted from it as giving the pith of a very laborious inquiry. "Upon mere financial grounds a public loan contracted in terminable annuities is, perhaps for the state, the form of borrowing the most desirable, for at the lapse of the term the annual burden of the debt ceases. But connected with the plan of terminable annuities there are other considerations of a higher and more general nature than those of mere finance; and when the whole question has to be discussed it will appear, that while terminable annuities may be employed with advantage as one of several forms of funding, it would be exceedingly unwise to resort to them as the sole or even as the principal method." See Terminable Annuities; National Debt. F. H.

ANSELL, Charles, F.R.S., born 1794, died 1881. He entered the Atlas Fire and Life Assurance Company in 1808, became actuary of the life branch in 1823, and held the office down to 1864. He applied himself much to the actuarial problems connected with friendly societies, and wrote—

A Treatise on Friendly Societies in which the Doctrine of the Interest of Money and the Doctrine of Probability are applied, London, 1835, 8vo (published by the Society for the Diffusion of Useful Knowledge; one of the first attempts to treat the subject scientifically). H. R. T.

ANTEDATE. To date a document from a point of time earlier than the actual date of execution. If this is done with the intention of defrauding a third party, the parties to the document are liable to be prosecuted for forgery. E. S.

ANTICHRESIS. A contract of Roman law by which a mortgagee acquired the right to take the profits of the mortgaged property in the place of interest on the mortgage debt. Such contracts were not allowed, if they were made with the intention of evading the Roman usury laws. E. S.

ANTI-CORN-LAW LEAGUE (1836-46). It cannot be doubted that the irritation caused by the agitation for the factory acts, which applied to children only in the manufacturing districts, and not to those in the agricultural part of the country, supplied a great stimulus to the agitation against the corn laws. The formation of an association under the name of the Anti-Corn-Law League was the inevitable consequence, and apart from an active convass all over the country, the association at last started a newspaper of great force and ability under the name of the *League*, complete copies of which are very scarce.

The success of the League was in great degree assisted by the potato plague and the very scanty harvest of 1845. Sir R. Peel, then in power, took the step of opening the ports, an expedient which the executive had frequently adopted during the scarcities of the 18th century. It was impossible to reverse this policy, and the repeal of the corn laws became inevitable in the next session of parliament. It is remarkable that a parliament certainly summoned to defend and maintain the laws, should have been the instrument of extirpating them, but the situation could not be trifled with, and Peel, as the introducer, said that his action averted the troubles of 1848 from the United Kingdom.

As soon as the act repealing the corn laws had received the royal assent, the leaders of the League at once broke up their organisation and extinguished the machinery which they had driven at high pressure. This policy was exceedingly conciliatory, and greatly assisted in obviating any reaction. J. T. R.

ANTI-RENT AGITATIONS. The phrase has been used by English writers with special reference to the movement countenanced by O'Connell in 1843, and a similar movement

countenanced by some of the Irish leaders in 1881, among the Irish tenants. In both cases the threat to pay no rent was a temporary expedient to enforce an article of popular policy. The advocates of the nationalisation of the land cannot be said to conduct an anti-rent agitation, for they do not aim at the removal of rent, but at a change of landlords. In the United States the name "anti-renters" was given to the farmers of New York State, holding their lands on long leases, who demanded the removal of quit rents and ground rents (1839-46). The movement led to riot and bloodshed; and was at the time only partially successful, though now the system of land-tenure which occasioned it has all but wholly disappeared.

See E. P. Cheyney, *The Anti-rent Agitation of the State of New York*, Philadelphia, 1887. J. B.

ANTONINUS, St., archbishop of Florence, was born 1389 and died 1459. Following Aquinas (*q.v.*), Antoninus defines what transactions are to be condemned as usury; and remarks on the difficulty of determining the fair price Justum Pretium of an article on sale. See his *Summa Theologica in quatuor partes distributa*, 2d Part, Title II. ch. 6, 7. F. Y. E.

A POSTERIORI reasoning is reasoning that is directly based on observation and inductive generalisation. It follows, therefore, and does not precede experience of the specific class of phenomena to which the conclusion relates. The kind of reasoning with which it is contrasted is called A Priori (*q.v.*)

It is held by the majority of English economists that in political economy the purely *a posteriori* method is inefficacious for arriving at any considerable body of valuable truth. The opposite view is maintained by the Historical School of Economists. Without entering here upon the controversy between these schools, it may be pointed out (1) that the *a posteriori* method is, in certain cases, employed even by those who for the most part reject its aid in economic reasoning; and (2) that when entire reliance is not placed upon it, it may still be used to supplement reasoning of a different type. As an illustration of *a posteriori* reasoning in economics, reference may be made to Mill's treatment of the subject of peasant proprietorship in the second book of his *Principles of Political Economy*. A considerable mass of evidence is cited as to the working of this system in those countries in which its operation can be observed on a large scale; and the force of Mill's argument as to the influence of peasant properties in stimulating industry, training intelligence, and promoting forethought and self-control, depends more upon the generalisations that the above evidence seems to justify, than upon direct deductions from general principles of human nature.

A posteriori reasoning is also described as analytical, and as inductive. For further discussion, see Analytical; Deductive; Inductive; Synthetic Method. J. N. K.

APPANAGE (French *apanage*, from Provençal verb *apanar*, to give bread), the provision made by French kings and barons for daughters and younger sons (*puis-nés*), as distinguished from the eldest son (*aîné* = *aisné*, *avant-né*). The appanage of royal princes consisted in some cases of lands so extensive and wealthy (*e.g.* Normandy or Burgundy) that the possessors were dangerous rivals to the monarch himself, especially as the salic law increased their prospects of ultimate succession to the throne; hence the attempts (*e.g.* of Charles V. in 14th century) to limit the appanage of sons to a specified money revenue from land. As early as Philip Augustus (13th century), the daughters' dowries were paid in that form. From St. Louis downwards (13th century), the kings tried to secure the reversion of the appanage to the crown on failure of male heirs; and the crown lands ceased in point of fact to be redivided. Appanages were abolished by the constituent assembly in 1790, and the burden put on the civil list; revived by Napoleon and the Bourbons, they disappeared definitively in the revolution of July 1830.

The corresponding provision in England is an annual income voted by parliament out of the imperial taxes (*e.g.* in 1889 for the Queen's grandchildren). A similar course is followed in Italy. In many German states the appanage is often a mere rent-charge on crown-lands. The German lawyers of the 18th century confined the term *apanagium* to the provision in money, and used *paragium* for provision in lands (see Civil List). J. B.

APPLETON, Nathan, merchant and cotton manufacturer; born in New Hampshire 1779; died in Massachusetts 1861. He was one of the three founders of the great manufacturing town of Lowell; served a number of years in congress, where he was a champion of Whig principles. His best known pamphlet is *Remarks on currency and banking*, Boston, 1841, pp. 48 (3d ed. 1857, pp. 63). He favoured a national bank as a fiscal agent of the treasury, but denied its necessity to regulate the currency, equalise the exchanges, or supply a uniform paper medium. He also wrote *An examination of the banking system of Massachusetts in reference to the renewal of the bank charters*, Boston, 1831, pp. 48. Appleton objected to state banks with small capitals: the bank should have a paid-up capital exceeding its issues; and the tax should be upon the circulation instead of upon the capital. He persistently advocated high tariff duties by speeches in congress; of these the one of 30th May 1832 is the most valuable, in which he criticised at length the theory that a tax on imports is a tax on exports. In an article on *Labour*

in Europe and America compared, *Hunt's Magazine*, 1844, pp. 16, he denied that the theory of wages as stated by English economists applied to American labour, owing to the cheapness of land. A list of his writings is found in Robert C. Winthrop's *Memoir of Nathan Appleton*, Boston, 1861, pp. 64.

Among them may be mentioned, *What is a Revenue Standard? and a Review of Secretary Walker's Report*, 1846.—*Introduction of the Power-Loom and Origin of Lowell*, 1858.

D. R. D.

APPLIED ECONOMICS. The term *applied economics* or *applied political economy* has been used in at least three different senses: (*a*) To designate the application of economic science to the solution of practical questions; in this sense equivalent to what is also called the ART OF POLITICAL ECONOMY. (*b*) To designate the application of economic science to the interpretation and explanation of particular economic phenomena. (*c*) To mark off the more concrete and specialised portions of economic science from those more abstract doctrines, which are held to pervade all economic reasoning. The term is used in this last sense by JEVONS when he remarks that "currency, banking, the relations of labour and capital, those of landlord and tenant, pauperism, taxation, and finance, are some of the principal portions of applied political economy, all involving the same ultimate laws, manifested in most different circumstances." (*Fortnightly Review*, Nov. 1876, p. 626.) J. N. K.

APPORTIONMENT (No. 1). The distribution of one subject in proportion to another previously distributed. Though RENTS form the chief subject matter of apportionment, the term is also applied to the division of covenants and conditions. As regards rents a distinction has to be drawn between rent services and rent charges. A rent service may be apportioned by (1) act of God; (2) operation of law; (3) act of parties. (1) Where a portion of land demised is surrounded or covered by the sea, this being the act of God, the rent is apportioned so that the tenant pays rent in respect of the uncovered land only. (2) At common law there could be no apportionment of rent in respect of time, the contract for payment being regarded as "entire," or incapable of division. Hence a successor in interest succeeding before a periodical payment became due took the whole, and the representatives of his predecessor took nothing. This was remedied by the 11 Geo. II. c. 19, § 15; 4 & 5 Will. IV. c. 22; and 33 & 34 Vict. c. 35. The effect of these statutes is that all rents, annuities, dividends, and other periodical payments in the nature of income are like interest on money lent, to be regarded as accruing from day to day, and to be apportionable in respect of time.

(3) Where a part of a reversion was granted away, an apportioned part of the rent passed with it as incident thereto. By the 22 & 23 Vict. c. 35, § 3, where a reversion is severed into parts, and the rent is "legally apportioned," the assignee of each part becomes entitled, as regards his part, to the benefit of all conditions for securing the payment of rent attached to the original undivided rent, and the 10th section of the Conveyancing Act, 1881, extends this principle, and renders all conditions and provisos apportionable.

As regards rent charges, the general rule was that they could not be apportioned, and hence if the owner of a rent charge purchased any portion of the land out of which it issued, the whole rent charge became extinct. This was remedied by the 10th section of the 22 & 23 Vict. c. 35, which provided that the release from a rent charge of a part of the land charged, should only bar the right to recover any part of the rent charge out of the land released.

[*The Law of Rents*, by W. A. Copinger and J. E. C. Munro, London, 1886.] J. E. C. M.

APPORTIONMENT (No. 2). Apportionment may be further explained as the distribution of benefits or burdens connected with property among several persons becoming successively or simultaneously owners of the property to which they refer. With regard to *successive* owners, rent and other periodical payments were formerly not apportionable. If land was leased for the life of the tenant-for-life only, the subtenant was not liable to pay any rent for the period between the last payment and the death of the tenant-for-life. If the lease extended beyond the life of the tenant-for-life, and if the person entitled to the rent for life died on the day before the rent became due, his representatives could not claim any part of the rent, and the whole of it went to the person next entitled to the income of the land; the same thing happened with respect to dividends on stock, or annuities to which a person was entitled for life. Successive acts of parliament, beginning with one passed in the reign of George II., have gradually removed these anomalies, and now the Apportionment Act of 1870 provides that all rents, dividends, and periodical payments in the nature of income, shall be considered as accruing from day to day, and shall be apportionable in respect of time accordingly. Apportionment of benefits or burdens between persons becoming *simultaneously* owners of property was formerly not possible in many cases. Rent-charges, for instance, were not apportionable, and if the owner of a RENT-CHARGE purchased part of the land subject to it (which naturally had the effect of releasing that part from the rent-charge) the whole property became discharged; in the same way the benefits of conditions of re-entry and other conditions in leases could

not be apportioned; if land subject to a lease was sold in part or sold in several lots, the benefit of such conditions lapsed entirely. Ordinary rent was always apportionable between persons becoming simultaneously the owners of the property with respect to which it was payable, and modern acts (among which the Property Law Amendment Act of 1859, and the Conveyancing Act of 1881, are the most important) have provided for the apportionment of rent-charges, and of the benefit of conditions in leases among simultaneous owners of land subject to a rent-charge or a lease. Under the TITHE COMMUTATION ACT of 1836, the rent-charge in lieu of tithes may be specially apportioned, so as to throw the amount attributable to the tithes of an entire estate upon some particular persons in exoneration of the residue.

E. S.

APPRAISERS. Sworn and licensed valuers of poinded goods (goods on which execution is levied) in Scotland. The business of appraisers (valuers) in England is usually conjoined with that of the auctioneer.

APPRECIATION OF STANDARD. The alterations in purchasing power of the standard of value are, when the period over which the investigation extends is only a short one, among the most difficult questions into which the economist has to inquire. Remote events stand out in this respect more clearly. The great, and up to the present time permanent, depreciation occasioned by the enormous finds of the precious metals in South America which followed the discovery of that continent by Columbus, is now matter of history, as is also the further change in the same direction occasioned by the development of new mines in California and Australia, commencing rather less than fifty years ago. During a comparatively recent period, however, now extending over ten or fifteen years, the balance appears to have turned the other way, and an appreciation of gold, to a considerable extent, to have taken place. It was pointed out by Giffen, *Essays in Finance*, 2d series, p. 19, that average prices, 1885, stood "about 5 per cent less than the average of 1845-60," and by Palgrave, *Appendix B, Third Report of Royal Commission on Depression of Trade and Industry*, pp. 329, 330, that, as compared with 1865-69, prices in 1885 showed a drop of more than 20 per cent. *The Variation of Prices and the Value of the Currency since 1782-1865*, a paper by JEVONS, *Journal of the Statistical Society of London* for June 1865, reprinted in his volume *Investigations in Currency and Finance*, shows the oscillations of prices very clearly. Periods of transition in matters of this description are, as CHEVALIER remarks (*De la Baisse Probable de l'Or*), painful to pass through. It is here, however, the fact of a recent appreciation which it is desirable to note, not the causes which have led to it, or the results which have followed it. Though the tendency of the standard of value appears, so far as history extends, to have been generally towards depreciation, and not towards appreciation, so recent and marked an instance of appreciation deserves record (see also DEPRECIATION OF MONETARY STANDARD, STANDARD OF VALUE).

[For history, Jacob, *On the Precious Metals* London, 1831.—Jevons, *Investigations in Currency and Finance*, London, 1884.—Giffen, *Essays in Finance*, 2d series, London, 1886.—Palgrave, *Appendix B, Third Report, Royal Commission on Depression of Trade and Industry*, 1886.]

APPRENTICESHIP. A system by which those intended to follow a particular occupation engage to serve and work under a master for a certain period, and the master engages to teach them during that period the industry or branch of industry in which he is occupied. This system was once very common, if not universal; and with few, if any, exceptions, every workman was compelled to serve a master for seven years before he could practise a handicraft on his own account. A large number of the rules and regulations of the mediæval craft guilds (see GILDS) dealt with the conditions of apprenticeship; and a solemn ceremonial was observed when a boy was bound over to be an apprentice, and when, the period of his service being ended, he became a full member of the guild. These rules and regulations, which obtained the binding authority of uniform custom, were embodied in law by the statute of apprenticeship (5 Eliz. c. 4) by which it was "enacted that no person should for the future exercise any trade, craft, or mystery at that time exercised in England unless he had previously served to it an apprenticeship of seven years at least." The system, however, was open to abuse; and Adam SMITH (*Wealth of Nations*, bk. i. ch. x. part ii.), protested against the way in which the trade corporations employed it, to maintain a monopoly of their exclusive privileges. But gradually it came to be held that industries which had arisen since the passing of the statute, or which were not carried on in market towns, were exempt from its limitations; and in the development of factory industry at the close of the 18th and the commencement of the 19th century, manufacturers exhibited a wholesale disregard of the restrictions of apprenticeship. The efforts of the early trades unions (see TRADE UNIONS) were directed in many cases towards securing the observance of the ELIZABETHAN LEGISLATION. Prosecutions were instituted against the masters with successful results. But the operation of this statute was suspended by parliament for the cloth trade during successive years from 1803 to 1809, and in the last year it was altogether rescinded for that trade, and in 1814 for all trades. The custom, however, of apprenticeship

continued to prevail; and it still forms part, in theory at least, of the policy of some trades unions to attempt, by positive regulation or otherwise, to restrict the number of apprentices, and to insist on the production of evidence of having served a regular apprenticeship before a man is admitted to the membership of the union. But despite of these efforts the system appears, with the growing subdivision of labour, to be falling into disuse, in many trades, at any rate in its strict form. Some writers have urged, although others have maintained that this is impracticable, that technical education should be generally introduced as a substitute for apprenticeship.

[For the regulations of the old craft guilds on the matter cp. Brentano *on Gilds* and Howell's *Conflicts of Capital and Labour*, ch. i. pt. iv. For the efforts of early trades unions cp. the same book, ch. ii., and Arnold Toynbee's *Industrial Revolution: Lecture on Industry and Democracy*, pp. 178, etc. For the present attitude of workmen cp. Howell, ch. v. and Marshall's *Economics of Industry*, bk. iii. ch. v. §§ 3 and 9. A list of recent German works on Apprenticeships is given by Prof. Stieda in an article in *Jahrbücher für Nat. Oek. u. Stat.* 21st June 1890 ("Das gewerbliche Lehrlingswesen").] L. L. P.

APPRENTICESHIP, STATUTE OF (5 Eliz. c. 4). This statute is of considerable importance in the history of English labour. Its general drift was not new. Many of its provisions had been previously enacted. The preamble points out the failure of former statutes "partly through the imperfection and contrariety" in the laws themselves, and "chiefly for that the wages and allowances . . . are too small, and not answerable to this time (1562) respecting the advancement of prices of all things." The legislature proposed therefore "to digest and reduce into one sole law" the substance of the old statutes, in the hope that the new law (duly executed) would "banish idleness, encourage husbandry, and yield unto the hired person, both in the time of scarcity and in the time of plenty, a convenient proportion of wages." Former statutes, thirty-four in number since Edward III., were repealed so far as they concerned the hiring, keeping, wages, etc. of servants, labourers, artificers, and apprentices. According to the new statute certain persons were confined to the craft in which they were brought up, and all persons not otherwise employed, nor possessing a certain amount of property, were compelled to serve in husbandry. The latter clause was supplemented with a law of settlement, which however was relaxed in time of harvest. The regulations with regard to apprenticeship were important. The term of apprenticeship was to be seven years. Except in the case of smiths, wheelwrights, plaisterers, bricklayers, etc., certain property qualifications were necessary for apprenticeship, and the craft could be carried on only by those who had served their time. Every person with three apprentices must keep one journeyman. No one could be apprenticed over the age of twenty-one. Penalties of imprisonment were imposed on those who refused to be apprenticed. The act was administered by the justices of the peace, or other magistrates specified in the act. They were empowered to fix the rate of wages in their districts, etc. at the Easter Quarter Sessions, and to enforce this rate by fine and imprisonment. They were also to arbitrate in disputes between masters and apprentices. The hours of labour were to be from 5 A.M. till 6 or 8 P.M. in the summer, and from daylight to dusk in the winter, not more than two and a half hours being allowed for meals. There were numerous other provisions of a less important character. By 39 Eliz. c. 12 the act was extended to weavers. It was continued by 43 Eliz. c. 9, and 1 Jac. c. 6, the latter of which extended the power of the justices and town magistrates to fix limits to the wages of all labourers and workmen whatever. As Prof. Rogers points out (*Agriculture and Prices*, vol. v. p. 821) the law was "effectually supplemented" by 14 Car. II. c. 12, 3 W. and M. c. 11, 8 & 9 Will. III. c. 30, 9 Will. III. c. 11, and 11 Will. III. c. 13.

It is not easy to form a just estimate of the effects of Elizabeth's legislation. The materials are scanty, and contemporary evidence of the working of the statute difficult to obtain. A. SMITH (*Wealth of Nations*, bk. i. ch. x. pt. ii.) criticised the apprenticeship clauses in terms which were certainly justified at the end of the 18th century. Brentano (*English Gilds*, § 5) has taken a more favourable view of the statute, and has produced evidence to prove that modern trade unions originated in the non-observance of its provisions. Brentano's criticism, however, is open to much adverse comment. Prof. THOROLD ROGERS attributed much of the misery of the working classes in succeeding generations to the operation of this statute. He described it (*Work and Wages*, p. 353, cp. also *Agriculture and Prices*, vol. v. ch. xxiii., xxviii.) as "the third in the set of causes from which pauperism was the inevitable effect." He justly remarks that the statute "seems to favour traders and artisans at the expense of labourers in husbandry, by limiting the number of the former and making the latter the residuum of all non-apprenticed labour." It may be doubted, however, whether at present it is possible to form an accurate judgment with regard to the working of the statute. Comparatively few wages assessments have yet been discovered. In 1793, RUGGLES could refer to only one. Sir F. EDEN increased the number to eight, and Thorold Rogers to eleven. Four more are printed in Hamilton's *Quarter Sessions from Elizabeth to Anne*,

pp. 12, 163, 249, and 273, and two in the Belvoir Papers (one of them, 9th April 1621, in full). The act was no doubt a great hardship where it was rigorously enforced, especially amongst the agricultural labourers. Three Devonshire assessments covering a period of 119 years (*vide* Hamilton) indicate a very slow increase, except in the case of indoor servants, while in Bucks the rate of wages for farm labourers in the reign of Anne was no greater than that fixed in Devonshire in the reign of Elizabeth. It may, however, be doubted if the act was on the whole effectual. Prof. Rogers's statistics show that the wages received by the labourers in the main exceeded the rate fixed by the justices, *i.e.* the employers were more merciful than the Quarter Sessions, or (more probably) wages fluctuated in spite of the statutes. The statute continued in force, without substantial modification, until 1825, when it was repealed; but it had been practically a dead letter for many years.

[Adam Smith, *Wealth of Nations*, bk. i. ch. x.—Eden's *State of the Poor*, London, 1797.—Brentano's *English Gilds*, § 5.—Thorold Rogers's *Work and Wages*.—Thorold Rogers's *History of Agriculture and Prices*, vols. iv. v. vi.—Thorold Rogers's *Economic Interpretation of History*.—Hamilton's *Quarter Sessions from Elizabeth to Anne*.—MSS. of the Duke of Rutland preserved at Belvoir Castle vol. i. (Historical MSS. Commission).]

W. A. S. H.

APPROPRIATION.* The appropriation of the instruments of production by individuals either singly or in groups, is of great antiquity. Food and other forms of movables seem to have been appropriated prior to land, and though we cannot imagine a time when private property was unknown, there is strong evidence to show that in primitive times the important forms of property were regarded as belonging to the group and not the individual. The Irish early feudal system was, for instance, based on the loan of cattle by the chief to his adherents, the land belonging to the whole tribe. The accumulation of movable property would begin, when once a separate household was acquired by a family, since a house would involve the necessity of some movable articles. When in course of time the relative importance of land and movables altered, land was appropriated by groups of men united by a real or supposed blood relationship. From this collective form of ownership private property in land was slowly evolved (see PROPERTY.—Maine's *Early History of Institutions*, London, 1875;—Maine's *Village Communities*, London, 1871;—Laveleye's *Primitive Property*, London, 1878).

The title of modern states to the territories appropriated by them is based either on conquest or on discovery and occupation, confirmed by lapse of time (Wheaton's *Int. Law*, ed. Boyd, London, 1880, c. iv.) It is now admitted that the high seas, *i.e.* the seas more than 3 miles distant from low water mark, cannot be appropriated either by a state or an individual (*Ib.* p. 251) though the fish in such seas may be taken by capture. As regards the seas within 3 miles of the coast, some writers allow a state jurisdiction only, whilst others assign to it property over such seas (see the various views in Hall's *Int. Law*, Oxford, 1890). From the maxim *cuius est solum eius est usque ad cœlum et ad inferos*, it follows that not only mines but even air may be appropriated. Under English law the owner of land as such is entitled to all the light and air that fall perpendicularly on his land. By lapse of time, *i.e.* twenty years, he may also acquire a right to the reception of light and air in a lateral direction, and that either for domestic or trade purposes (Gale on *Easements*, London, 1888).

The extent to which appropriation of natural agents is to be permitted is a matter for state regulation (see OCCUPATION; POSSESSION; PROPERTY).

J. E. C. M.

APPROVED BILL. A bill of exchange to which no reasonable objection can be made.

A PRIORI reasoning is reasoning that starts from general principles, and not from an inductive examination of particular instances. What constitutes the basis of the argument is thus prior to observation or experience of the specific class of phenomena to which the conclusion relates.

RICARDO's ordinary method of reasoning is *a priori*. Thus, in order to show that a tax on raw produce falls on the consumer, he takes for granted the general principles that profits tend to equality, and that the price of raw produce is determined by its cost of production on land that yields no rent. Then, taking the case of produce raised on the margin of cultivation, he argues as follows: "A rise of price is the only means by which the cultivator could pay the tax, and continue to derive the usual and general profits from this employment of his capital. He could not deduct the tax from his rent, and oblige his landlord to pay it, for he pays no rent. He would not deduct it from his profits, for there is no reason why he should continue in an employment which yields small profits, when all other employments are yielding greater. There can then be no question, but that he will have the power of raising the price of raw produce by a sum equal to the tax. A tax on raw produce would not be paid by the landlord; it would not be paid by the farmer; but it would be paid, in an increased price, by the consumer" (*Principles of Political Economy and Taxation*, ch. ix.) It will be seen that this argument does not presuppose any examination of instances in which taxes on raw produce have actually been imposed, or of the consequences observed to result therefrom. According to the school of Ricardo the right method of economic reasoning in general is of the above character; it is *a priori*. The

same view is expressed in Senior's dictum that "political economy depends more on reasoning than on observation."

A priori reasoning is also described as synthetical, and as deductive, the terms used in antithesis being A Posteriori (*q.v.*), analytical, inductive. For further discussion see Analytical; Deductive; Inductive; Synthetic Method. J. N. K.

AQUINAS, St. Thomas (*b.* 1225, *d.* 1274), the greatest of the schoolmen, is of the utmost importance in the history of economic thought, in that he sums up the teaching of the mediæval church, and at the same time furnishes the point of departure for all subsequent reasoning down to the Renaissance. He would seem, indeed, to have had no special interest in the economic side of life; he was led to handle it partly because his *Summa Theologica* was intended to be encyclopædic, partly because the growth of industry and trade, and the tendency to apply to them the maxims of the Civil Law (*q.v.*), rendered necessary a restatement of Christian principles. Politics and economics were not yet separated from theology; accordingly the utterances of Aquinas on political economy are to be found not in any one place, but scattered up and down his great treatise and his minor writings. It will, however, be convenient to group them under three heads—(i.) fundamental questions of social organisation; (ii.) the ethics of business; (iii.) the theory of taxation.

(i.) The early Christian Fathers had used language which might seem to deny the justice of private property; the canon law had expressly included community of goods among its examples of natural law, and had even incorporated a passage ascribed to Clement of Rome (bishop of Rome in the latter part of the 1st century), wherein it was laid down that the use of all that is in the world ought to be common to all men. Aquinas, with strong common sense, set himself to justify individual ownership without directly taking up a position of antagonism to those earlier ideals. In the first place, he explained away the significance of the generally accepted phrase as to natural law, by drawing a distinction between what was natural absolutely, and what was natural by way of consequence. In the former sense, it was true, there was no reason why a field should belong to one man rather than to another; but in the latter sense such ownership might properly be called natural, considering how necessary it was that the land should be cultivated and that its fruits should be enjoyed in peace. Moreover, argued Aquinas, the phrase did not mean that natural law forbade private property, but only that it did not introduce it; its introduction was due to positive law, the invention of human wisdom. In the second place, he fell back on the teaching of Aristotle—whose *Politics* he was the first of the schoolmen to incorporate with mediæval thought—and pointed out the beneficial results of private property; and in Aristotle's maxim that property should be *owned* separately but *used* for the common good, he found a distinction which seemed to harmonise with the meaning of the Fathers.

But if the absence of private property was not suitable for society generally, might it not be a duty incumbent on such Christians as sought perfection in the religious life to divest themselves of their wealth? St. Francis had taken poverty for his bride; there was a strong party among the Franciscans who opposed even the corporate holding of property; and the question of apostolic poverty was already beginning to tear the church asunder. Accordingly Aquinas devotes to this topic a more than usually long section. Poverty, he lays down, is not an end in itself, but a means—a means towards following Christ. Riches, therefore, are wrong only so far as they are hindrances in the way of this object. And if external goods are possessed only in such moderate quantities as are necessary for men's due maintenance, they need not distract the soul. If they are the common property of a religious body, the care of them may even be regarded as a work of charity. But in this case the degree in which material goods are desirable, will depend on the character of each particular organisation.

The duty of almsgiving had been closely associated in the teaching of the Fathers with their views as to property; and it had been inculcated without much regard to possible limitations. Here again Aquinas endeavoured to state traditional principles in a more prudent form. The giving of alms was, of course, with him also, a matter of divine command, and not merely a counsel of perfection. But it was to be guided by right reason, according to which men were not bound, unless in exceptional cases, to give more than their superfluity; and superfluity was defined as that which remained after providing for a man's due maintenance, and that of those dependent on him, in the rank of life to which they belonged.

In what to Aristotle was the other great fundamental question, viz. Slavery, Aquinas was clearly but little interested, doubtless owing to the changed conditions of society. He nowhere discusses at any length the justice of personal servitude, and his occasional arguments on the subject seem purely academic. He would appear to have accepted Aristotle's view of the expediency of slavery; but he differed from him in believing that by nature (in the "absolute" sense of the term) all men were equal; and he followed some of the Fathers in holding that slavery was among the consequences of the fall of Adam.

(ii.) Of wider practical importance was his teaching as to the ethics of business. He

contributed but little to the development of church doctrine in this regard; but he gave it a systematic shape which greatly strengthened its hold upon men's minds. In laying down that, in buying and selling, nothing but a JUST PRICE (*q.v.*) should ever be demanded or paid, Aquinas was quite conscious that he was enunciating a principle in direct opposition to that of the civil law; and he met the difficulty by urging that human law was necessarily limited, and that it could not, like divine law, prohibit all that was opposed to virtue. As to trade, he agreed with Aristotle that it was base (see ARISTOTLE), and with the Fathers that it was sinful, if carried on for the sake of gain; but it was not sinful when the merchant sought only a moderate reward for his exertions, and spent it in the maintenance of his family or the relief of the poor; still less when it was carried on for the public good, that a country might not be without the necessaries of life (see FATHERS). Concerning usury he repeated the arguments of his predecessors Alexander of Hales and Albert the Great, laying particular stress on the distinction between FUNGIBLES and CONSUMPTIBLES (*q.v.*): with the loan of a consumptible, such as money, passed the right to make use of it, so that to demand the return of the money *and* a payment for its use was to make a double charge for one thing. He allows, however, that a compensation may justly be received for a DAMNUM EMERGENS (*q.v.*), *i.e.* the loss arising from the non-restoration of a loan at the appointed time, though not for a LUCRUM CESSANS (*q.v.*) But he makes two dangerous concessions when he allows that a man may, without sin, *borrow* from one who is already a usurer, if it is for some good object; and that a man may, without sin, entrust his money to a usurer, if the purpose is not gain, but the safe keeping of the money.

(iii.) The treatise *De Regimine Principum*, the most popular manual of statecraft in the later Middle Ages, is, unfortunately, from the hand of Aquinas only as far as the middle of the second chapter of the second book (see PTOLEMY OF LUCCA). But there is extant almost interesting letter of his in reply to certain questions of the Duchess of Brabant; among others as to the justice of TAXATION. Aquinas replies that as princes are established by God, not that they may seek their own gain, but the common utility of the people, they should, as a general rule, content themselves with the revenues of their demesne lands. But when these will not suffice for the defence of the country or to meet other emergencies, then it is just that subjects should be called upon to give their aid. This position is identical with the demand, which appears so often in the constitutional struggles of the 14th century in England, that the king should "live of his own."

[There is no adequate account of the economic teaching of Aquinas, which indeed may be best collected from Aquinas himself. See the *Summa Theologica*, as to *private property*, Secunda Secundæ, Quæstio 77, Articulus 3; Q. 66, Art. 1, 2; as to *voluntary poverty*, Q. 188, Art. 7; as to *alms*, Q. 32, Art. 5, 6; as to *slavery*, Pars Prima, Q. 96, Art. 3; Prima Secundæ, Q. 94, Art. 5; as to *price*, Secunda Secundæ, Q. 77; as to *usury*, Q. 78; as to *taxation*, *De Regimine Judæorum* among the Opuscula. The best brief account will be found in C. Jourdain, *La Philosophie de S. Thomas d'Aquin*, 1858. See also W. J. Ashley, *Economic History*, vol. i. pt. i., 1888;—P. Janet, *Histoire de la Science Politique*, 3d ed., 1887;—H. Contzen, *Geschichte der Volkswirthschaftlichen Literatur im Mittelalter*, 2d ed., 1872;—J. J. Baumann, *Die Staatslehre des h. Thomas*, 1873 (little more than a series of extracts in German). For its relation to the teaching of the church in general, W. Endemann, *Studien in der Romanisch-Kanonistischen Wirthschafts u. Rechts-lehre*, vol. i., 1874; vol. ii., 1883; and the brief *Geschichte des Kirchlichen Zinsverbotes* of F. X. Funk, 1876.]

W. J. A.

ARABLE LAND, CONVERSION TO PASTURE IN GREAT BRITAIN. Naturally and historically Great Britain is a grass-growing pastoral country. Nature, by the moist climate, suggests a preponderance of permanent grass-land; history proves that, before the Napoleonic wars and the pressure of scarcity and corn laws, this preponderance in fact existed. But, at the beginning of the 19th century, vast areas of poor soils, of downs, heaths, sheep-walks, and rabbit-warrens, were ploughed up under the temptation of high prices. With the lower prices of cereals these tracts could not be tilled with profit, and this led to the re-conversion of arable land to pasture, and the consequent diminution of the corn-growing area. In 1872 the total acreage of arable land was about 18½ million acres, in 1882 it was 17½ millions, in 1892 some 16½ millions, in 1902 about 15½ millions, and by 1914 it had declined to 14¼ million acres. The rate of decline was therefore fairly uniform throughout these 40 years. As would be expected, the conversion of arable land to pasture was greatest in the districts where there are large areas of poor soil of the nature of down land, and smallest in the eastern counties, which are, by climate and by soil, least adapted for pasture. As a result of the high prices during the war and the necessity for an increased home production of cereals, the arable area was increased by about 1½ million acres between 1914 and 1918, but by 1923 the area had reverted to about the pre-war figure in all parts of the country. The immediate results of the change are usually (1) a considerable reduction in the farmer's labour bill. On good grass land the regular labour necessary is not more than half that required on ordinary arable land, whilst on sheep-walks the number of workers is comparatively very small, but there is little saving in the labour bill when tillage is replaced

by dairying. The census returns for 1911, compared with those for 1871, show a decrease in the number of agricultural labourers of about 400,000. Part of this decrease must be attributed to the development of agricultural machinery. (2) A considerable loss in the producing power of the country is, for a time at least, the second result of the conversion. Under favourable circumstances of soil and climate, it takes ten years before a profitable permanent pasture can be obtained. Under unfavourable conditions, the period may be doubled or even trebled. The expense of converting arable land to pasture is greatest where the return is least, and longest postponed. Thus in the moist climate of the west, permanent pasture may be secured by allowing arable land to fall down to grass. In the eastern counties, "tumble-down" land can scarcely ever become profitable pasture. Great care, liberal management, abundance of manure, are necessary. If these are neglected, especially in the third and fourth years from the sowing, the good grasses will die out and the soil will become bare or grow only poor grasses and weeds. On reconverted pasture, the value of the additional sheep, cattle, pigs, and hay will for many years—and the greater the necessary outlay of capital the longer the profits are postponed—fall below the value, even at present prices, of the corn and straw they replace.

[The practical side of the question is treated in all books on agriculture. But see especially the article by Mr. Faunce de Laune of Sharsted, Sittingbourne, in the *Journal of the Royal Agricultural Society*, pt. i. 1882, *Permanent and Temporary Pasture*, by Martin J. Sutton, and *Grassland Farming Pastures and Leys*, by W. J. Malden, 1924. See below, CONVERSION OF ARABLE LAND INTO PASTURE.] R. R.

ARBITRAGE (STOCK EXCHANGE). On the stock exchange arbitrage dealings are those which are done by houses in London, for instance, to cover other transactions which may be done in Paris or Berlin or New York or in other distant places. The method pursued is often something like this: The arbitrage dealer learns by telegram from some distant place that his colleagues stationed there have bought or sold certain securities at advantageous prices. His business then is to sell or buy in London if possible at a better price for the same securities. For example, A. sells Egyptian Unified bonds in Paris at a price corresponding to 80 here. B., an arbitrage dealer in London, thereupon endeavours to buy the same amount here at 79¾, leaving a profit of ¼ per cent to be divided between the two firms. Or C. buys in New York Erie Railroad shares at 29½, and seeks to improve his bargain by instructing D., his colleague in arbitrage business, to sell the same number of shares at 30 here if possible. The nicest attention to the rate of exchange, cost of transit, insurance, loss of interest, etc., must be given to these transactions. Arbitrage is also conducted, under the title of "shunting," between London and Liverpool, or Manchester, or Glasgow, as the case may be, the favourite operations between these markets being English railway stocks, which are dealt in indifferently in each. A. E.

ARBITRAGE (GENERAL BUSINESS). An expression used in general business language for international dealings in stock exchange securities, bullion, specie, bills of exchange, etc. If the price of a security is higher in one place than in another, it is said that there is a margin between the two places in the particular security, and arbitrage dealers, whenever they discover such a margin, take advantage of it by effecting purchases in the cheaper, and sales in the dearer market. As one of the two operations must precede the other, the margin may disappear before the transaction is completed; but this is not the only element of uncertainty. The original arbitrage transaction always involves a covering transaction to re-imburse the buyer for his outlay. The re-imbursement can be effected either by a reversed buying and selling of some other security, or by the remittance of bills of exchange from the seller to the buyer, or by the issuing of a draft on the seller by the buyer. The first operation may not always be possible without loss, and the second and third may be disturbed by an unfavourable fluctuation in the rate of exchange. The original margin ought to be wide enough to cover all these risks as well as the outlay for carriage, insurance, till stamps, security stamps, brokerage, etc. In some cases it may be advisable, instead of forwarding the securities, to continue the bargains on each side until the margin is reversed, and then to close the transaction by buying in the place where the first sale took place and by selling in the place where the first purchase took place. In this way all the forwarding expenses and stamps are saved on both transactions, but there must, of course, be a reasonable prospect of such a reversal in the margin within a measurable time, and there must be no unfavourable difference between the rates of continuation in the two places (for this see CONTINUATION OR CONTANGO). As whenever there is a margin in any security all arbitrage dealers buy in the one place and sell in the other, the price in the cheaper place necessarily rises almost immediately, and in the same way the price in the dearer place falls, and as, moreover, for various reasons, which it would not be possible to explain in a short space, arbitrage operations are frequently effected with a very slight, or even without, margin, the natural effect of arbitrage business is to maintain the prices of securities in all places on the same level. E. S.

ARBITRAGE (EXCHANGE). The difference in the rates of exchange (*i.e.* the prices payable

for bills of exchange on foreign countries) in different places occasions the so-called "arbitrage transactions in exchange." If, for instance, bills on demand on Berlin can be bought in London at 20·40, and bills on London can be bought in Berlin at 20·35, it will be profitable for a Berlin banker to buy the latter and to obtain in exchange bills on Berlin. For every £1000 on London which he buys he has in that case to pay 20,350 marks, while the same £1000 in London will enable him to purchase 20,400 marks on Berlin; he therefore receives 50 marks more than he spent, from which sum, however, the expenses for postage, bill stamps, brokerage, etc., must be deducted. In the case of long bills, allowance must also be made for the rates of discount on both sides. These transactions become more complicated if a bill on a third place is remitted from one of the two places—if, for instance, the Berlin banker, instead of obtaining a bill on Berlin in London in exchange for the bill on London remitted by him, instructs his correspondent to send a bill on St. Petersburg; in such a case there is more risk of loss involved, as, before the St. Petersburg bill is received in Berlin and negotiated there the exchange may vary to the disadvantage of the transaction. The competition of arbitrage dealers naturally reduces the margins of profit, and thus the rates of exchange in all important centres nearly correspond with each other. [See H. Deutsch, *Arbitrage*, Effingham Wilson, 1910.] E. S.

ARBITRATION BETWEEN EMPLOYERS AND EMPLOYED. A system of adjusting industrial disputes. It should not be identified with conciliation (see CONCILIATION, BOARDS OF), although a hard and fast line of distinction cannot be drawn. Arbitration may, perhaps, be said to be adapted to a more advanced stage of a dispute, and to be more compulsory in character. If the representatives of employers and employed at a board of conciliation cannot arrive at a mutual agreement, they may refer—and definite provision is generally made for such ultimate reference—to an arbitrator. Arbitration may also be found possible where there is no board of conciliation established, and has sometimes paved the way for the institution of such a board. The details of arbitration are subject to great variation. The arbitrator may be an outsider, or he may be himself a member of the trade in which he is called upon to arbitrate. The advantage of the former alternative is the avoidance of suspicions of bias which may naturally arise in the latter case; but one disadvantage is the necessity of acquainting the arbitrator with the meaning of those technical terms which would be familiar to a member of the trade. In some cases the attempt is made to avoid these difficulties by the appointment on either side of an arbitrator who is a member of the trade, and by the selection, in addition, of a single umpire who is an outsider invested with the power of final decision should the arbitrators disagree. The questions referred to an arbitrator may also be various, but, in the generality of cases, they are concerned with the regulation of wages. The procedure pursued, again, is subject to variation, but is usually of the following nature. The arbitrator holds a court, as it is termed, on a fixed day. Some time before he is furnished with statements from both the contending parties, setting forth their rival claims and the arguments on which they are based. On the day when the court sits representatives of both sides attend and state their case, sometimes by means of printed or written documents, sometimes supplementing these by, or substituting for them, oral pleadings. The arbitrator asks for any additional evidence he may consider necessary, and makes his award either at once or at a subsequent date. The difficulties connected with industrial arbitration may be summarised under three heads. The award may be disregarded, and to avoid this some writers have urged that a legal character should be given to courts of arbitration, and a legal sanction to the awards of arbitrators. Others have contended that this would tend to impart too elaborate and technical a character to the proceedings, and that it is not in harmony with English traditions or inclinations. They have also pointed to the fact that there is already provision in the statute book for legalised arbitration, *e.g.* (1) a series of acts passed in the 18th century, providing for the settlement of disputes in particular trades, and consolidated in 5 Geo. IV. c. 96; (2) Lord St. Leonard's Act of 1867 (30 & 31 Vict. c. 105), providing for the establishment of councils of conciliation after the model of the French *conseils de prud'hommes* (see CONSEILS DE PRUD'HOMMES); and (3) Mr. Mundella's Arbitration Act of 1872 (35 & 36 Vict. c. 46), and that this legislation has hitherto proved inoperative. And therefore, they contend, the only satisfactory means of avoiding the difficulty is to secure thorough representation of the contending parties by means of TRADE UNIONS and MASTERS' ASSOCIATIONS (which see). The second difficulty connected with arbitration is the element of contentiousness naturally attaching to the proceedings, which are, however, often, if not generally, conducted with remarkable courtesy. The third and last, and perhaps the crucial, difficulty is that of securing accurate data for the arbitrator, and of determining the principle on which his award should be based—whether, that is, decisions as to changes in wages should rest on changes in the prices of the articles produced by the wage earners, or on changes in the cost of the raw material (see COMPETITION; ENGINEERING AND ALLIED INDUSTRY AGREEMENTS in Appendix.)

[For an account of these difficulties see Price's *Industrial Peace*, ch. iii., where a history is

given of the board of conciliation and arbitration in the manufactured iron trade of the north of England, and Professor Marshall's preface to the same work.—Consult also Jevons's *The State in Relation to Labour*, ch. vii.—Marshall's *Economics of Industry*, bk. iii. ch. viii.—Howell's *Conflicts of Capital and Labour*, ch. xi. part ii. ;—and for the difficulty of determining the principle on which the award should be based, Sidgwick's *Principles of Political Economy*, 2d ed., bk. ii. ch. x. § 5, and bk. iii. ch. vii. § 7, and Price's Paper on Sliding Scales and Economic Theory (*British Association Report*, 1889, pp. 523-35)—Crompton's *Industrial Conciliation* contains a good account of experiments in arbitration and conciliation, but is now out of print.] L. L. P.

ARBITRATION, Scotch. The principal distinctive features are: (1) the arbiter's award ("decreet-arbitral") can only be set aside by an action of reduction on the ground of bribery, corruption, or falsehood; (2) the arbiter has implied power to give costs; (3) the decree is attested and executed in the form of a regular deed; it is transcribed in the public registers, and gives warrant for execution issuing against either party. A. D.

ARBUTHNOT, John, M.D., born 1667; died 27th February 1734-35; he was appointed physician to Queen Anne; founded the Scriblerus Club with Swift, Pope, Gay, and Parnell; wrote some witty political satires, a few professional papers, and the following important work.

Tables of the Grecian, Roman, and Jewish Measures, Weights, and Coins reduced to the English Standard, London [1705], 8vo, reprinted as *Tables of Ancient Coins, Weights, and Measures, Explained and Exemplified* [published by his son Charles], London, 1727, 4to.—*Second Edition, with Appendix, containing Observations*, by B. Langwith, D.D., London, 1754, 4to (Latin translation by D. König, Lugd. Bat., 1764, 4to). H. R. T.

ARBUTHNOT, John, of Mitcham (Surrey), towards the end of 18th century, whose abilities as a farmer have been acknowledged by Arthur Young (*On the Husbandry of three celebrated British Farmers*, 1811, pp. 17-28), refutes, in *An Inquiry into the Connection between the present Price of Provisions, and the Size of Farms, etc.*, By a Farmer, 1773, the views of authors ascribing the high price of provisions to large farms, asserts that the proportion of land which is in some degree governed by its value should be equal to a given capital (p. 35), and ascribes the dearness to failures of crops, luxury in the mode of living, and the increase of post-horses. The remedy consisting in the extension and improvement of agriculture, he recommends enclosures. Then "make the trade free . . . let corn flow like water, and it will find its level" (p. 88). Even the bounty on its exportation is needless. The effects of importation from America are not dangerous, "for there labour is dear." He laments only that the development of large farms was accompanied by "the loss of our yeomanry, that set of men who really kept up the independence of this nation; and sorry I am to see their lands now in the hands of monopolising lords, tenanted out to small farmers, who hold their leases on such conditions as to be little better than vassals ready to attend a summons on every mischievous occasion," p. 139 (see Yeomen).

This work has been translated into French by Fréville, 1775, as the second volume of his *Arithmétique politique de A. Young*.—See M'Culloch, *The Literature of Political Economy*, pp. 193, 194.—K. Marx, *Capital*, vol. ii. pp. 746 note 2, 751 note 1. S. B.

ARCO, Gherardo Giambattista dei Conti d'Arco, born at Arco in the Tyrol 1739, died at Goito 1791, was a great personal friend of Condillac. As an economist he was a man of sound common sense, possessing no brilliant talent. His writings, consisting mostly of prize essays written for academies, have been collected by Custodi in his *Economisti classici Italiani*, 1804, Milano. His principal essays are dated as follows:

On the Political and Economical Harmony between Towns and Country, 1771 (Mantua Academy).—*On Corn Stores*, 1775 (Mantua Academy).—*On the Influence Commerce exerts over Talents and Habits*, published in 1782 (written in 1777 for the Academy of Marseilles).—*On the Influence the Spirit of Commerce exerts on the Domestic Economy of the People and on the prosperity of States*, 1778 (published in Cremona).—*Reply to the Question whether Agriculture or Industry is to be preferred in a fertile Country*, 1780 (Mantua Academy).—*On the Liberty of Transit Commerce*, 1784 (published in Mantua). M. P.

ARGENSON, René Louis de Voyer de Paulmy, Marquis d', born 1694, died 1757; was the eldest son of the "Garde des sceaux" of the same name, under the Regency. He is better known by his celebrated *mot* "*Pas trop gouverner*,"—lineal ancestor in the spirit of the "*laissez-faire, laissez-passer*" of Gournay,—than by his works, now little read. His *Considérations sur le gouvernement ancien et présent de la France* (published 1764, but written more than thirty years previously), in which he treats of democracy in a state governed by a monarch, deserves, however, to be reprinted. He was one of the most active members of the *Club de l'Entre-sol* (Place Vendôme), which was founded in 1724, and closed in 1731 by order of Cardinal de Fleury. A. C. f.

ARGENTARII. The bankers of ancient Rome. There were some special rules regarding their transactions. An action of a special kind could, for instance, be brought against an argentarius who had engaged to answer for the debt of another. The argentarii had special privileges as regards the right of set-off. E. S.

ARISTOCRACY. Aristocracy meant to the Greeks "government by those who are best."

in other words not government by one individual (monarchy), or by the majority (democracy), but by a select class, who are privileged because of some real or alleged superiority to the rest. Government by a class, if it possessed no such superiority, was not aristocracy but oligarchy (government of the few). Such are in the main the distinctions of ARISTOTLE (*Politics*). Aristocracy, however, has come to mean in our own day simply that class in society which is, or claims to be, superior to the rest, with or without any special power in the government. Historically, therefore, there have been as many forms of aristocracy as there are forms of excellence amongst men. There were aristocracies built on a superiority of race and birth, aristocracies of culture (such as a caste of priests); aristocracies of age and experience (senatus, γερουσία); military aristocracies, territorial aristocracies (of proprietors of land), and finally aristocracies of wealth (*equites*, merchant princes). It is of the last that Cicero recorded his opinion: "Nec ulla deformior species est civitatis quam illa in quâ opulentissimi optimi putantur" (*Rep.* I. 34). The popular notion of aristocracy changes with the popular standard of excellence; and the changes have clearly been, on the whole, for the benefit of civilisation. Between the actual equality of men in barbarous societies, and the endeavour after equality in the most civilised, there are intervening stages where society is necessarily composed of privileged and unprivileged classes. The relative justification of slavery, for example, lies in the sparing of the conquered, the training of them to habits of industry, and the securing to their masters of the leisure for the acquisition of science and culture. But if these were the conditions of the beginning of progress, they are not necessarily the conditions of its continuance.

In the same way an aristocracy of birth has been the means of reducing a people to military and political discipline, as in the Roman republic and mediæval Europe. The republic of Venice grew strong and wealthy under a governing council filled entirely by sons of office-holders. But the lessons once learnt, the teachers are dismissed. In Venice the closing of the *Libro d'oro* in 1309 was the abdication of the governing class. In modern times the two types of most importance in economical and social development have been the territorial and the commercial aristocracies. The aristocracy of feudalism became territorial when the reward of victory was the grant of lands. Land was in those times "the means not of subsistence merely, but of power and protection." Such customs as PRIMOGENITURE and ENTAIL preserved the estate to the lord's family; to divide the land would have been to lessen the power. But by thus endeavouring to maintain their own power, the lords were giving security of person to their dependants, and to their country a continuity and stability of institutions which every country in Europe needed above everything in those times. In addition they introduced a rule of conduct (*noblesse oblige*) which had in many ways a real superiority to that of common folk. Nevertheless the growth of absolute monarchies, of towns, guilds, and commerce, not only made the feudal institutions unnecessary as guarantees of stability, but revealed the fact that they might be hindrances to progress. Economical causes worked, among others, to free the dependants and to raise up formidable rivals to the power of the nobles. Politically their exclusive privileges may be said to have lasted in France till the Revolution of 1789. In England territorial nobles tempered the hostility of the merchant princes by admitting many of the latter from time to time within their ranks; and they thus saved their privileges for another half century. The aristocracy of wealth, which at first rivalled and then conquered the aristocracy of birth in England, will no doubt give place in its turn to a successor when its work is done. It is of a nature to invite the odium of those who are excluded from it, in proportion as fortunes seem to be due to chance and speculation more than to industry and talent. The recognition of its superiority is often the confession of weakness in presence of strength rather than reverence before admitted excellence. The latter feeling is not only consistent with modern democracy, but is an imperative condition of its health. Democracy claims a fair field for the exercise of all the powers of men, and anything like a hereditary caste of privileged persons would never be willingly created, and is very reluctantly maintained by it. But it recognises an inequality of ability, an aristocracy of genius, and an aristocracy of labour. The differences in talent between individuals, and the effect of heredity in intensifying them, will remain a constant factor of economical and social development (see also EQUALITY; FEUDALISM; HEREDITY; INHERITANCE, ESTATE OF).

[Bluntschli, *Staatslehre*, II. x. and VI. xix. (1875).—Stahl, *Philosophie des Rechts*, vol. ii. p. 103, *Der Adel* (1878).—Ad. Smith, *Wealth of Nations*, bk. iii.—G. C. Lewis, *Use and Abuse of Political Terms*, § 8 (1832).—Montesquieu, *Esprit des Lois*, II. iii., III. iv.] J. B.

ARISTOTLE.* By *Œconomic* (οἰκονομική) Aristotle meant the practical science, or art, of household management—practical wisdom (φρόνησις) applied to the household (*Eth. Nic.* VI. 8 § 3), the household (οἰκία) including the three relations of husband and wife, father and child, master and slave, and obviously requiring property for its maintenance (*Pol.* I. 2). The two disconnected books called *The Œconomics*, which have come down to us among Aristotle's writings, are certainly not his, but works of the Peripatetic school, the first being earlier and of

more value than the second (Zeller, *Phil. der Griechen*, Ed. 3, Theil II., Abtheil. II. p. 944). The first book of the *Politics* constitutes his own contribution to the subject (cp. *Pol.* I. 3, § 1; and III. 6, § 3), and is, indeed, summarised under the title of *περὶ τοῦ οἰκονομικοῦ, i.e. Concerning the Œconomist*, in the epitome by Areius Didymus (?) preserved in Stobæus (*Ecl.* II. c. 6).

Χρηματιστική, the science or art of wealth, is, he tells us, by some considered identical with household management, by some regarded as the most important part of it (*Pol.* I. 3, § 3). He treats of it in chaps. 8-11; and in these chapters, taken along with *Eth. Nic.* V. 5, §§ 6-16, we have what would now be called the "political economy" of Aristotle. Both households and states require means for their support. Wealth (πλοῦτος) is, therefore, defined as "a quantity of *instruments* for the household or state" (*Pol.* I. 8, § 15). This definition Mill (*Pol. Econ.* "Preliminary Remarks") would consider "philosophically correct," though like other English economists he prefers to define wealth in terms of Exchange. In *Eth. Nic.* IV. 1, § 2, Aristotle defines, or rather describes, property (Χρήματα) as "everything whose value is measured by money;" but the more scientific definition of the *Politics* serves him as a basis for his opinion about the true relation of χρηματιστική to οἰκονομική and πολιτική (as we should say "of economics to politics"). A science of instruments or means is obviously subordinate to a science of ends.

Aristotle uses χρηματιστική in the widest sense as equivalent to κτητική, the art of acquisition in general; but in a narrower sense it is limited to the art of acquiring that wealth which is only rendered possible by exchange and, on any considerable scale, by Money. The kinds of acquisition are distinguished as "natural" and "unnatural," the latter arising through the introduction of exchange. "Natural" wealth is to the household just what nature's provision of food is to animals, *e.g.* mother's milk to the young, or its ordinary food to the graminivorous or carnivorous animal. And so hunting, either of wild animals for their flesh or skins (fishing would fall under the same head), or of slaves to serve as "living tools," is named among the "natural" modes of acquisition. The "nomadic" life of those who rear sheep and cattle, agriculture (including the cultivation of fruit-trees), the keeping of bees (important when sugar was little known), and the rearing of fowls and fish — all these are considered "natural" ways of supporting life. Intermediate between these and the "unnatural" class, Aristotle places wood-cutting and mining: the man who grows corn is in immediate contact with nature, but the man who makes the spade, or plough, or procures the materials for it, is a step removed from nature—such, at least, seems to be his line of thought. Exchange (μεταβλητική), as already said, introduces the "unnatural" kind of acquisition. Aristotle distinguishes, as Adam Smith did again long afterwards, between the Value possessed by anything in *use* and its value in *exchange* (*Pol.* I. 9, § 2). If a shoe be worn, that is according to nature; if it be used to purchase other commodities, that is not "natural," though still a use of the shoe *quâ* shoe; for the person who takes it in exchange takes it because it is a shoe. Exchange only comes to be needed when we pass outside the limits of the household. In early stages of society, "as among many barbarians still," it took place by simple Barter (*Pol.* I. 9, § 5). The introduction of money (νόμισμα)[1] makes no difference in the character of exchange (*Eth. Nic.* V. 5, § 16), but facilitates it enormously by supplying a measure of value (πάντα ποιεῖ σύμμετρα, "it makes all things commensurable," *Eth. Nic.* V. 5, § 15) and a convenient medium of exchange. Money is defined as "a conventional exchangeable representative of demand" (ὑπάλλαγμα τῆς χρείας κατὰ συνθήκην, *Eth. Nic.* V. 5, § 11. Gold and Silver serve this purpose best; being useful themselves, they are at the same time easily carried about (*Pol.* I. 9, § 8), and, although liable to change in value, they do so less than other commodities (*Eth. Nic.* V. 5, § 14). At first they were always weighed, afterwards a stamp was imposed (*Pol.* I. 9, § 8). This brings out the *conventional* character of Currency, so that a change in the currency will make the old coins useless (*Eth. Nic.* V. 5, § 11). About money there are two opposite errors: (1) that wealth consists in a quantity of money (*Pol.* I. 9, § 10); (2) that it is something utterly valueless—(here he doubtless alludes to Cynic theories, such as are maintained in the pseudo-Platonic *Eryxias*).

The "unnatural" kind of χρηματιστική includes (1) Trade (ἐμπορία, commerce, and καπηλική, retail trade), different forms of which are ship-owning, the carrying-trade, shopkeeping; (2) Money-lending (τοκισμός, ὀβολοστατική), which is even more unnatural, for it is a perversion even of the natural use of money to make money breed money, instead of simply facilitating exchange; (3) Labour for wages (μισθαρνία); for while, in Aristotle's view, there are slaves by nature, the hired labourer, whether skilled or unskilled, is something contrary to nature—

[1] A remarkable proof of the force with which this conception has been impressed on modern thought is found in the reference made by Mirabeau to Aristotle at the session of the National Assembly, 12th December 1790 (see Dana Horton, *Report on International Monetary Conference*, Paris, 1878, p. 29 (art. Bi-metallism).

The same influence is also exemplified in the statement made by recent bi-metallists, "that the greater part of the value of νόμισμα (money) is given it by νόμος (law), to which it, as Aristotle says, both etymologically and actually owes its origin" (see letter to the *Times* of Chrysargyros, 26th May 1881), and in the remarks of H. Cernuschi, "Money is instituted by law: *nomos*, law; *nomisma*, money" in his work, *Bi-metallism at 15½ a necessity of the Continent, for the United States, for England*, by H. Cernuschi, London, P. S. King, 1881.

something for which he can find no proper place in his political ideal. Regarding wealth as an *instrument* to life, and therefore as a means and not as an end, Aristotle rejects the money-making life as one that no rational man would choose (*Eth. Nic.* I. 5, § 8, ὁ δὲ χρηματιστὴς [sc. βίος], βιαίός τίς ἐστιν, "The money-making life is" *either* "unnatural" *or rather* "chosen only under compulsion," "as a mere necessary"—a passage of which the mistranslation, "The money-maker is a violent person," determined the position of the usurers in Dante's *Inferno*, canto xi.) But is Aristotle quite consistent in holding, as he does, that the city state is "prior by nature," and so higher in type, than the village community or patriarchal family, and yet condemning as unnatural all the more complex economic conditions of city civilisation? His economic views are really dependent on the ethical principle that conduct (πράξις), and not the production of commodities (ποίησις), is the end for man. This and the prejudices of a slave-holding society prevented him, perhaps, from sufficiently understanding the economic structure even of the very society in which he was living.

To return to the original question, his answer is that only the natural kind of χρηματιστική is a part of household management. The other kind is subordinate or subservient (ὑπηρετική, *Pol.* I. 10, § 3); and, because concerned with mere means and instruments of living, both kinds are to be pursued only to a limited degree. Thus those are wrong who identify household management with amassing wealth, and statesmanship with finance.

While thus laying the foundations of a special science of wealth, Aristotle never treats the subject apart from ethical and political considerations. In *Eth. Nic.* V. 5, he seems to consider that the value of commodities is, in some way, determined by the value of the producers. Fair exchange is reciprocal action regulated by proportion (τὸ ἀντιπεπονθὸς κατ' ἀναλογίαν), *e.g.* as the farmer to the shoemaker, so must be the quantity of shoes that the farmer receives to the quantity of corn that the shoemaker receives. Money, as already said, makes commensurability and so equalisation possible between such incommensurable quantities. We may perhaps make his idea intelligible to ourselves by thinking of the amounts to be given in exchange as in the *inverse ratio* to the value of an hour's labour of each producer.

Aristotle was fully alive to the close relation between social or political institutions and economic conditions. In *Pol.* I. 8, he points out that, just as the food of animals determines their habits as gregarious or solitary, etc., so are men's lives different in the pastoral, the hunting and fishing, and the agricultural stage (or in various combinations of these). The pastoral is here placed first, not as being the rudest, but as that which leaves most leisure. And so in *Pol.* VI. (= VII. in the changed order of St. Hilaire, etc.) 4, when grouping the different types of democracy according to economic conditions, he considers a pastoral democracy less stable than an agricultural, because there is more leisure for political interests; while, again, an industrial population, living in a city, develops the most extreme form of democracy.

COLONIES are referred to as a remedy for over-population (VI. 5, § 9). The nature of a MONOPOLY (with the use of this term) is illustrated in I. 11. In criticising Plato's COMMUNISM Aristotle uses the argument, often repeated since, that "the magic of property" is needed to ensure due care of anything. Not abolition of all private property, but equalisation of property among the free citizens, along with the maintenance of a nearly equal population, constitutes his own ideal state on its economic side (*Pol.* VII. = IV. in order of St. Hilaire, etc.)

Most of Aristotle's economic discoveries may be said to have lain dormant, and to have required rediscovery in modern times. His influence, however, was directly exercised as one of the factors in the mediæval abhorrence of usury (cp. Ashley, *English Economic History*, I. pp. 145, 152. See CANON LAW; USURY).

[Newman, *The Politics of Aristotle* (Oxf. 1887), i. pp. 125-138; ii. pp. 165-208.—Jowett, *The Politics of Aristotle* (Oxf. 1885), vol. ii. pp. 24-37, especially p. 35, where will be found a convenient table of the various divisions of κτητική, which we are permitted to reproduce here in English:—

The art of acquisition (κτητική: but χρηματιστική is sometimes used in this wide sense).
1. Hunting (*a*) of wild beasts (*b*) of those who are "by nature slaves."
2. χρηματιστική (c. 9, § 1), the science or art of wealth.
   (1) Natural, including
      (*a*) keeping of cattle, flocks, etc.
      (*b*) agriculture (including cultivation of fruit trees).
      (*c*) bee-keeping.
      (*d*) keeping of fish.
      (*e*) keeping of birds.
   (2) Intermediate,
      (*a*) wood-cutting.
      (*b*) mining.
   (3) Unnatural (= μεταβλητική, exchange).
      (*a*) trade (commerce and retail trade).
         1st, ship-owning.
         2d, carrying-trade.
         3d, shopkeeping.
      (*b*) money-lending (usury).
      (*c*) labour for hire.
         1st, of the skilled artisan.
         2d, of the unskilled.] D. G. R.

ARITHMETIC, POLITICAL. Economic inquiry was sometimes styled thus during the early development of the study of economics, the best known example being found in the works of Sir William PETTY, who, writing in the latter half of the 17th century, speaks of

the mode in which he conducted his economic investigations—a mode which later inquirers have scarcely been able to improve on—thus: "The Method I take to do this, is not yet very usual; for instead of using only comparative and superlative Words, and intellectual Arguments, I have taken the Course (as a Specimen of the Political Arithmetick I have long aimed at) to express myself in Terms of *Number, Weight,* or *Measure*; to use only Arguments of Sense, and to consider only such Causes, as have visible Foundations in Nature; leaving those that depend upon the mutable Minds, Opinions, Appetites, and Passions of particular Men, to the Consideration of others: Really professing myself as unable to speak satisfactorily upon those Grounds (if they may be called Grounds,) as to foretell the Cast of a Dye; to play well at Tennis, Billiards, or Bowls (without long Practice,) by Virtue of the most elaborate Conceptions that have ever been written *De Projectilibus et Missilibus,* or of the Angles of Incidence and Reflection" (p. 98).

Several Essays in Political Arithmetick, by Sir William Petty, London (Fourth edition), 1755.

ARITHMETIC, POLITICAL. HISTORY OF. The name of this mother science, both of statistics and of political economy in England can be traced to Sir William PETTY'S *Discourse made before the Royal Society the 26th of November 1674, Concerning the use of duplicate proportions in sundry important particulars,* London, 1674 (the Epistle Dedicatory to His Grace William, Lord Duke of Newcastle). "There is," he says, "a *political arithmetic* and a *geometrical justice* to be yet further cultivated in the world; the errors and defects whereof neither wit, rhetoric, nor interest can more than palliate, never cure. For falsity, disproportion, and inconsistence cannot be rectified by any sermocinations, though made all of figurate and measured periods, pronounced in tune and cadence, through the most advantageous organs; much less by grandisonous or euphonical nonsence farded with formality; no more than vicious wines can be remedied with brandy and honey, or ill cookery with enormous proportions of spice and sugar: *Nam Res nolunt malè administrari.*" Besides the founder of this new science other eminent British writers laboured on the subject of "political arithmetic," desiring to supply by its means solid arguments in favour of the economical superiority of the nation. They extended the field of investigation to the extent and productiveness of land and population, considering them to be the real sources of national riches. These computations could be no more than estimates of complex facts of political interest, starting from the most typical and calculable instances. Though Adam SMITH confesses not to have great faith in political arithmetic (*Wealth of Nations,* bk. iv. ch. v.), its conclusions have often been affirmed by later investigations and its methods followed by modern statists.

This method is exemplified by the *Natural and Political Observations mentioned in a following Index and made upon the Bills of Mortality,* By John GRAUNT, citizen of London, *With Reference to the Government, Religion, Trade, Growth, Ayer, Diseases, and the several changes of the said City.* London, 1662. By an ingenious analysis of the bills of mortality (after 1603), Graunt constructed a rude statistical statement of births, deaths, and disease, the very beginnings of vital statistics.

Sir W. Petty used political arithmetic to inquire into the wealth of the nation, taking sometimes the annual consumption, sometimes the poll and other taxes as basis. His followers were Gregory KING (1696), whose name is connected with the laws of prices; Ch. DAVENANT (1656-1714), Erasmus PHILIPS (1725), A. HOOKE (1750), Mitchell (1767), Pulteney (1779), Arthur YOUNG in the second part of his *Political Arithmetick* (1779), the first being a treatise on agricultural politics (1774), and G. CHALMERS (1783, 1812). Decaying since Davenant, this branch of political arithmetic reached its end with the inquiries founded upon the new income tax [introduced in 1843]; H. BEEKE (1800); W. PLAYFAIR (1801, author of a *Breviary* showing on a principle entirely new the resources of every state and kingdom in Europe), London, 1801, and P. COLQUHOUN (1815), still professing the old method.

In France VAUBAN, *Dixme Royale* (1707), and later on QUESNAY and MIRABEAU (1760), LAVOISIER (1791), and LAGRANGE (1796) tried to calculate the production and consumption and revenue of their nation, relying on the doctrines known under the title of AGRICULTURAL SYSTEMS (*q.v.*)

To the inquiries into the number of population and its increase, about which numerous controversies had taken place (Hume *v.* Wallace, Temple *v.* Bell, Howlett *v.* Price, and at last Malthus *v.* Godwin), the census of 1801 put an end. The inquiries on the movement of population were continued and developed in the most remarkable manner by E. HALLEY, *An Estimate of the Degrees of Mortality,* 1693. He gave the first exact account of the chances of life and hints as to its application to insurances and annuities on lives. His followers in England were Derham (1713), DEMOIVRE (1725), SHORT (1750), Simpson (1742), HODGSON (1747), Brakenridge (1755), PRICE (1771), HEYSHAM (1797);—see C. Walford, *The Insurance Cyclopædia,* vol. i., Annuities on Lives and Bills of Mortality. This branch of political arithmetic, concerning insurance calculations, has survived the others and is sometimes still called by its old name.

Following this line of inquiry, W. KERSSEBOOM (1777) in Holland, A. DEPARCIEUX (1746) in

France, Wargentin (1754-1767) in Sweden, inquired into the average probabilities of life. The most systematic of this series of writers is John Peter Süssmilch (*Göttliche Ordnung*, 1741, 4th ed., 1775). Taking the regularity of the phenomena of mortality and conjugal fertility, as well as that of the rarest events of life for a proof of divine interference, his work became the forerunner of Malthus's theory of population as well as of Quetelet's moral statistics.

It is besides worth notice that modern Demography (*q.v.*) comprehends nearly the same domain of statistical inquiry which was originally cultivated by political arithmetic; it deals with the numerical apprehension of facts "concerning trade and government, others concerning the air, countries, seasons, fruitfulness, health, diseases, longevity, and the proportions between the sex, of ages of mankind" (John Graunt, *Natural and Political Observations*, 1662. The Epistle Dedicatory).

[See Davenant, *Of the use of Political Arithmetic* (1698); *Works*, vol. i. p. 128.—Melon, *Essai politique sur le commerce*, 2d. ed. 1736, ch. xxiv.—Egerton Brydges, *Censura Literaria*, 1805, vol. i. pp. 59-79.—Ingram, *History of Political Economy*, p. 51.—John, *Geschichte der Statistik*, pp. 155-273.—Meitzen, *Geschichte, Theorie, und Technik der Statistik*, pp. 15-181.—J. B. Say, *Cours complet*, part ix. ch. iii.—M'Culloch, *Literature of Political Economy*, pp. 211, 258, 271.—R. Giffen, *The Growth of Capital*, 1890.—Gabaglio, *Storia e teoria generale della statistica*, 1880,—H. Westergaard, *Die Grundzüge der Theorie der Statistik*, 1890, pp. 253-270,—Farr, *Vital Statistics*, 1885.] S. B.

ARITHMETICAL RATIO OR PROGRESSION. Three or more quantities are in arithmetical progression when they increase or decrease by a common difference, *e.g.* 1, 4, 7, 10, where the common difference is 3; 2, $2\frac{1}{2}$, 3, $3\frac{1}{2}$, where it is $\frac{1}{2}$; and 25, 21, 17, 13, where it is 4. Malthus introduced the term into political economy in comparing the possible increase of food with that of population. He thought that after a country was as fully peopled as Great Britain was in 1798, the addition which could be made in the course of any given period, such as twenty-five years, to the normal annual production of food would actually decrease as the annual production of food grew larger. But for the purpose of argument he was willing to suppose that instead of decreasing, the possible periodical addition might remain the same. Under this supposition, if the annual production of food were always increased as much as possible, it would be represented at the end of successive equal intervals of time by quantities in arithmetical progression, or, as Malthus put it, the production of food would increase in an arithmetical ratio. Population, on the other hand, Malthus described as having the capacity and tendency to increase in a Geometrical Ratio (*q.v.*)

[Todhunter's *Algebra*.—Malthus, *Essay on the Principle of Population*, bk. i. ch. i., and "Population" in the *Encyclopædia Britannica*, 4th ed., Supplement 1824.] E. C.

ARLES or ARRHES. Earnest-money—money paid on initiation of a bargain to secure its fulfilment.

ARMED NEUTRALITY. This doctrine acquired renewed vitality when President Wilson in his address to Congress on 26th February 1917, after recounting the relations between Germany and the United States and the failure to protect neutral rights by diplomatic means, stated that "there might be no recourse but to armed neutrality," but on 2nd April the President declared that, owing to the illegal conduct of Germany, armed neutrality had become impracticable. The First Armed Neutrality, 1780, was designed to protect the trade with belligerents of those States which were neutral in the War of American Independence. The treaties concluded by Russia with Sweden, Denmark, the Netherlands, Prussia, Austria, Portugal, and the Two Sicilies—France, Spain, and the United States acquiescing—declared that the closed coast trade of belligerents should be open to neutrals; that enemy goods on neutral vessels, except contraband, should be free; and that a blockade must be efficient. These provisions were to be upheld by armed force. Great Britain, however, maintained her standpoint, and by the peace treaties, and by the action of some of the neutrals themselves when they became belligerents, the First Armed Neutrality fell to the ground.

The Second Armed Neutrality of 1800 was also initiated by Russia to enforce the provisions of the First Armed Neutrality, and in addition the principle that merchantmen under convoy should not be liable to visitation and search if the naval officers in command declared that they did not carry contraband of war. Sweden, Denmark, and Prussia adhered, but the bombardment of Copenhagen and the defeat of the Danish Fleet by the British under Nelson, and the assassination of the Czar Paul, broke up the Armed Neutrality. It was immediately followed, however, by the Maritime Convention of 17th January 1801 between Russia and Great Britain, to which Sweden and Denmark adhered, by which the closed coast trade was opened to Russia, a blockade must be effective, and enemy goods on neutral vessels became confiscable. This Convention was annulled by Russia in 1807, and in her declaration of war against Great Britain she reaffirmed the provisions of the First Armed Neutrality, from which she declared she would never depart. Nevertheless in 1809 she herself violated the principle of "free ships, free goods."

[Brown Scott, *The Armed Neutralities of 1780 and 1800* (1918).] H. H. L. B.

ARMSTRONG, Clement (an English writer

about 1530) complains of the speculations in wool of merchant staplers, who drive by importations of foreign commodities the money out of the realm and destroy husbandry by converting the cornfields into sheepwalks. He proposes to erect a staple of woollen cloth in London, to restore tillage, and to set people to work, for "the holl welth of the body of the realme risith out of the labours and workes of the common peple" (p. 61). *Sermons and Declaracions agaynst Popish Ceremonies*, reprinted in *Drei volkswirtschaftliche Denkschriften aus der Zeit Heinrichs VIII. von England*. Zum ersten Male herausgegeben von Reinhold Pauli, 23, Bd. Abhandlungen der K. Gesellsch. der Wissenschaften zu Göttingen, 1878.—G. Schanz, *Englische Handelspolitik gegen Ende des Mittelalters*, Bd. i. pp. 83, 475.—Cunningham, *The Growth of English Industry and Commerce*, 1890, p. 292 n. S. B.

ARND, Karl (a German economist), born at Fulda, 1788, was an architect in Hesse, and died, 1877, at Hanau. He was a warm advocate of Free Trade and of one Single Tax on rent. He opposed Ricardo's theories and his German followers, as well as Fr. List's protectionist views.

Die neuere Güterlehre, 1821.—*Die naturgemässe Volkswirtschaft*, 1845.—*Die Volkswirtschaft, begründet auf unwandelbare Naturgesetze*, 1863.—*Die Befreiung der Bodenrente und die Emancipation des Bauernstandes*, 1865.—*Adam Smith's des jüngern Prüfung der heutigen volkswirtschaftlichen Systeme*, 1867; see Roscher, *Geschichte der Nationalökonomik in Deutschland*, p. 500; and *Handwörterbuch der Staatswissenschaften*, herausgegeben von Conrad, Lexis und Loening, 1890, vol. i. p. 931. S. B.

ARNOULD, Ambroise-Marie (1750-1812) a French economist, was director of the board of commerce under the revolution. His works contain valuable information upon the theory of trade, the state of the Balance of Trade in Europe during the 18th century, French finances, etc. He advocated the division of France into departments according to their homogeneous economical nature; and appealed to all maritime nations to confederate against the menacing power of England.

De la Balance du Commerce, 2 vols., 1791.—*Repartition de la contribution foncière*, 1791.—*Système maritime et politique des Européens pendant le 18e. siècle*, 1797.—*Histoire générale des finances de la France*, 1806. S. B.

ARRANGEMENT WITH CREDITORS. See Bankruptcy, Law and Administration.

ARRANGEMENT, Deed of. An instrument embodying an agreement between a debtor and the general body of his creditors for the purpose of modifying the debtor's obligations without resorting to bankruptcy proceedings. Some additional security is frequently given in such cases, but the fact of the other creditors foregoing part of their claims, and thus making the debtor's position an easier one, is considered to be a valid consideration for the indulgence granted by any individual creditor. An arrangement of this nature is, of course, binding on those creditors only who expressly assent to it. The Deed of Arrangement Act 1887 (50 & 51 Vict. c. 57), provides that a deed of arrangement is void unless registered within a given time and stamped with an *ad valorem* stamp. The register is open to the public. The act defines a deed of arrangement so as to include (*a*) any assignment of property; (*b*) any agreement for a composition; (*c*) any deed of inspectorship; (*d*) any letter of licence to carry on business with a view to the payment of debts; (*e*) any agreement for the carrying on or winding up a business for the benefit of creditors. E. S.

ARREARS. Sums remaining unpaid after they are due; for example—interest in arrear; arrears of dividend; instalments in arrear; arrears of wages, of rent, etc.; contracts in arrear, etc. Such arrears often involve penalties (see Contract, Law of; Wages).

ARREST. A process of the Admiralty Division of the High Court by which the removal of a ship or cargo pending an action referring to the same is prevented. Certain actions in that Division (called actions *in rem.*) are not brought against a personal defendant, but against a ship or a cargo against which the claim is directed. The owner may, on giving security, prevent the arrest by the entry of a *caveat* (*s.v.* Caveat) or, after the arrest has been effected, obtain a release. E. S.

ARRESTMENT (Scots law). Attachment of debt either before or after judgment.

ARRESTMENT JURISDICTIONIS FUNDANDÆ CAUSA. See Jurisdiction, Scotch.

ARRIVABENE, Giovanni, Count, born in 1787 in Mantua, died June 1881. Condemned to death for political conspiracy in 1824, he fled abroad. In 1847 he was a promoter of the economical congress of Brussels. His high position amongst political men, and in cultivated society, gave him a standing as an economist which he otherwise would not have held. He was a friend of N. W. Senior and translated some of his best writings. Arrivabene's writings were collected in 1870 under the title, *Scritti morali ed economici*, Firenze. A part of his life has been told by himself in *Un epoca della mia vita, Memorie*, Torino, 1860. The book which first established his credit was written by him in London, *Di varie società e istituzioni di beneficenza in Londra*, 1828, Lugano. M. P.

ART OF POLITICAL ECONOMY. By the majority of English economists for the last half century political economy has been held to be in itself a positive science, concerned exclusively with the investigation of uniformities, and not directly formulating a single practical rule of action. While the knowledge it affords may be turned to practical account by the legislator or

the social reformer, it is described as in itself standing neutral between competing social schemes. In other words, a sharp line of distinction is drawn between economic science, and the application of economic science to practice. A very different view is taken by the majority of continental economists, who, generally speaking, make little attempt to separate theoretical and practical problems. Adequately to treat these problems apart from one another is even maintained to be an impossibility, and hence it is denied that political economy can properly be regarded as a purely positive science. Its primary function, according to this view, is to direct conduct to given ends rather than merely to investigate facts of a given kind.

It has been further maintained that English economists are themselves inconsistent, and that, professing to construct a pure science of economics, they do in fact build up an economic art. It is pointed out, for instance, that nearly the whole of the last book of MILL's political economy is concerned with the discussion of practical questions. It would not be difficult to explain away this apparent inconsistency, so far as our leading economists are themselves concerned; but at the same time it cannot be maintained that the distinction which they profess to draw between political economy and its applications has ever been clearly grasped beyond what may be called the inner circle of their disciples. One consequence of this has been grave misconception as to the true meaning of many of the laws which they have formulated. They have often been understood to prescribe what ought to be, when their sole intention has been to determine what is. Partly to correct this error, and partly for other reasons, it has been proposed explicitly to recognise the twofold aspect of economic inquiry by definitely formulating an economic art as well as an economic science.

[See, in particular, Sidgwick, *Principles of Political Economy*, 1887, p. 395. The art is described by Dr. Sidgwick as consisting mainly of the theory of what ought to be done by government to improve production or distribution, and to provide for governmental expenditure. A similar division of economic doctrine was indicated by Senior, *Political Economy*, Introduction, p. 2 *et seq.*, ed. 1854, and the distinction is also put clearly by Professor Cossa. The latter writer describes the art of political economy as studying economic phenomena with the immediate aim of providing safe rules for administration, or of directing economic institutions, so that they may conduce to the general welfare. Compare, further, Keynes' *Scope and Method of Political Economy*, ch. ii., note B.] J. N. K.

ARTÉL (Russian for "gang,") is used specially of the Russian associations of independent workmen undertaking a job in concert and dividing its gains equally. This primitive form of *artél* is still to be found (*e.g.* among the fishermen of Archangel). But the peasants, at least in the less fertile districts, find greater security in working for a contractor; and the "gangs" so working have no co-operative feature, except occasionally the common purchase of provisions. In towns the *artél* is often simply a trade guild with mutual responsibility; thus that of bank porters is jointly responsible for its several members. Since the Emancipation, 1861, various local councils throughout Russia have tried to establish associations for production, with scant success. The workmen's own attempts have been more fortunate, especially in popular banks. But the new co-operative societies will not be a mere revival of the old *artél*. The industrial village of Struve & Co., engineers (founded 1885), is on the model of Pullman City, U.S. The communism of the sect called Doukhobors differs both from true co-operation and from the old *artél* (see BANKS, POPULAR; CO-OPERATION).

[*Les Artèles et le Mouvement Co-opératif en Russie*, W. Longuinine, (Paris, 1886).—*Russia*, Mackenzie Wallace, ch. vi. (1877).—*Proprietà Capitalista*, Loria (1889), vol. ii. pp. 436-7.—*Political Science Quarterly* (New York), March 1887,—Rabbeno, *Le Società Co-operative*, Part I. (Milan, 1889). See too the article by W. Stieda in the *Jahrbücher für Nationalök. und Statist.* (Neue Folge), vi. pp. 192-230. The Russian authorities include Isajeff, Kalachoff, Nemiroff, Vreden, Scherbina, and Novoselsky.] J. B.

ARTICLES OF APPRENTICESHIP. Written agreements by which the master promises to instruct, and the apprentice promises to learn and serve. The master frequently receives a premium, which must be set forth as the consideration of the agreement for the purpose of ascertaining the stamp duty. Seven years were formerly the minimum period of apprenticeship, but there is now no fixed period. The master is entitled to all the apprentice's earnings and has certain other rights under the contract notwithstanding the apprentice's infancy, but he cannot bring an action to enforce the covenants of an infant apprentice, and the apprentice may disaffirm the contract on attaining the age of twenty-one. The master's bankruptcy determines the contract. Disputes between masters and apprentices to the business of a workman may be brought before the justices, who may make an order directing the apprentice to perform his duties under the apprenticeship, or may rescind the instrument of APPRENTICESHIP (*q.v.*) (38 & 39 Vict. c. 90, §§ 5-7). E. S.

ARTICLES OF ASSOCIATION contain the regulations concerning the constitution and management of joint-stock companies registered under the Companies Acts. The first schedule of the Companies Act 1862, Table A, contains a set of regulations which may be adopted wholly or in part, and which in the case of a company limited by shares are deemed to be adopted by the company, if the memorandum

of association is not on registration accompanied by articles, or in so far as the articles do not expressly exclude or modify them. In the case of a company limited by guarantee, or of an unlimited company, articles of association *must* always accompany the memorandum. While the MEMORANDUM OF ASSOCIATION cannot be varied even by the unanimous decision of all the shareholders unless such variation is confirmed by the court under the provisions of the act of 1890 (except with regard to the amount and division of the capital), articles of association may be varied by special resolution and the company cannot deprive itself of its power to alter them. In a conflict between the articles and the memorandum the former must give way. Articles of association generally contain most of the following heads: (1) Preliminary (definitions, commencement of business, allotment of shares, etc.), (2) Certificates, (3) Calls, (4) Transfer and Transmission of Shares and Stock, (5) Share Warrants, (6) Forfeiture and Lien, (7) Conversion of Shares into Stock, (8) Increase of Capital, (9) Reduction of Capital, Consolidation and Sub-division of Shares, (10) Surrender of Shares, (11) Borrowing Powers, (12) General Meetings, (13) Votes of Members, (14) Directors (qualification, etc.), (15) Proceedings and Powers of Directors, (16) Officers, (17) Dividends, (18) Accounts and Audit, (19) Notice, (20) Arbitration, (21) Winding up (see JOINT-STOCK COMPANIES, ETC.; see PARTNERSHIP; LIMITED PARTNERSHIPS ACT, 1907, App. to Vol. III. E. S.

ARTICLES OF ROUP (Scotch). Conditions of sale by auction.

ARTISAN. An artisan is a person employed in the industrial arts, formerly distinguished from other labourers by the fact that he works for himself. This, however, is only true of a few remaining village artisans, such as the blacksmith and the carpenter. The early English artisans were few in number. They supplied labour only, their employers finding materials. In course of time they became organised in guilds, at least in the towns (see GILD). The 15th century saw the rise of the capitalist artisan, but the invention of machinery paved the way for the modern forms of industry under which production is carried on by associated labour working under capitalists. The artisan is now usually a workman employed by others, though in some districts and in some villages a few of the old capitalist artisans still remain.

[*Six Centuries of Work and Wages*, by J. E. T. Rogers, London, 1884.—*Labour in Europe and America*, by Edward Young, Washington, 1870.—*Conflicts of Capital and Labour*, by George Howell, London, 1878 (see LABOUR, SKILLED).]

J. E. C. M.

ARTS AND CRAFTS. See CORPORATIONS OF ARTS AND TRADES.

AS. A Roman coin, of an alloy of copper and tin called *aes*, of different weights and composition at different times. Originally 1 lb., reduced to 2 oz. after the first Punic War, to 1 oz. during the second Punic War, and finally, by the Papirian Law, to ½ oz. Design: a sheep, (*pecus*, hence the word pecuniary), an ox, or a sow. F. E. A.

ASGILL, JOHN, born at Hanley Castle, Worcestershire, 1659, called to the English bar 1692, expelled from the Irish House of Commons 1703, and from the British Parliament 1707, for an eccentric pamphlet contending that man could be translated to heaven without dying. He left this world in the ordinary way, 1738. He wrote the following economic works.

Several Assertions proved in order to create another Species of Money than Gold and Silver, London, 1696, 8vo (based on the theory "man deals in nothing but earth;" a contemporary pamphlet asserts that it is plagiarised from J. BRISCOE's (*q.v.*) *Discourse on the Late Funds*, 1691, 4to).—*Essay on a Registry for Titles of Land*, London, 1698, 12mo (4th ed., 1758).—*A Collection of Tracts*, London, 1715, 8 parts, 8vo.—*Abstract of the Publick Funds Granted and Continued to the Crown since 1 W. & M.*, London, 1715, 4to (reprinted in Somers's *Tracts*, 1815, xiii. pp. 730-742). H. R. T.

ASHBURTON, ALEXANDER BARING, first lord, second son of Sir Francis BARING, was born 1774. He visited America on business connected with his father's firm, the head of which he became in 1810; he was president of the BOARD OF TRADE in 1834, and raised to the peerage in 1835. He concluded the boundary treaty between the United States and England at Washington in 1842, and died 1848. He wrote—

Inquiry into the Causes and Consequences of the Orders in Council and an Examination of the Conduct of Great Britain towards the neutral Commerce of America, London, 1808, 8vo (two editions; opposes restrictions on commerce).—*The Financial and Commercial Crisis Considered*, London, 1847, 8vo (three editions; to show how mischievous at that date was the Bank Charter Act of 1844).

H. R. T.

ASHLEY, JOHN, member of council in Barbadoes, died at Blackheath, Kent, 1751. He wrote—

The Sugar Trade, with the Incumbrances thereon laid open, London, 1734, 8vo.—*Some Observations on a direct Importation of Sugar from the British Islands*, London, 1735, 4to.—*Memoirs and Considerations concerning the Trade and Revenues of the British Colonies in America*, London, 1740-43, 2 parts, 8vo. H. R. T.

ASSAY. The assay methods for SILVER and GOLD are analogous, in so far that both are purified by the action of a solvent, but the base metals are removed from silver by fused litharge, while in its turn silver is parted from gold by nitric acid.

If the silver has been associated only with readily oxidisable metals, especially copper, as is usually the case when silver coins are

assayed, it then only becomes a question of providing the amount of lead necessary to furnish, by oxidation, sufficient litharge to dissolve the oxides and carry them away. If, however, the silver is associated with gold, the latter metal resists oxidation, and will remain on the cupel with the silver. The cupellation stage must then be supplemented by a "parting" operation, that is, the silver must be dissolved away by some solvent that will leave the gold untouched, and for this purpose nitric acid is universally employed. If the silver contains but a minute particle of gold, the presence of the latter will be indicated by a few specks of brown powder left at the bottom of the vessel in which the silver is dissolved; if, however, the silver contains about one third of its mass of gold, and has been extended into a strip, the gold will remain, after the action of the acid, as a coherent band retaining the original form of the strip but much reduced in volume. There is this difference between the assay of gold and silver. In the case of the cupellation assay of silver, the button of metal has only to be removed from the cupel, and when the adhering bone ash has been removed with a brush, it passes direct to the balance. The process would also be sufficient for gold, if it contained no other precious metal; when, however, the problem is to ascertain by assay how much gold is contained in an alloy, which may contain silver or platinum and other metals of similar properties, then care must be taken that the amount of gold believed to be present in the alloy does not exceed the third part of the mass, as a larger proportion of gold would protect the alloy from the solvent action of the acid, and the greater the amount of gold, the less perfect would be the attack of the acid. The first stage of assaying a gold alloy, say a sovereign, is to melt it with such an amount of silver as shall yield a button containing rather less than one third of its weight of gold. For the sake of convenience and for the incidental advantage that the solvent action of fused litharge removes copper and other impurities, the first stage of the assay of gold is conducted on a cupel, the object to be attained being mainly to secure a button of gold and silver in a convenient form for submitting to the subsequent operations. The alloying stage would, however, be just as effective if it were conducted in a small non-porous receptacle, such as a small crucible of glazed porcelain.

The subsequent operations are, flattening the button, annealing it, rolling it into a strip, and annealing it a second time. It is then coiled into a spiral, or cornet, and treated by two successive portions of nitric acid in order to remove the silver; after this the spiral of spongy gold, which retains the original form given to the silver-gold alloy, is heated to redness, when it becomes bright, and is sometimes so coherent that it may be unrolled without fracture. The cornet is then weighed on a delicate balance, and its weight, compared with that of the portion of metal taken for assay, affords a means for readily calculating the proportion of precious metal present in the mass assayed (see ALLOY; PERIOT). C. R-A.

ASSESSED TAXES. A group of taxes "on houses, carriages, men-servants, saddle and carriage horses, and race horses" (Dowell, *History of Taxation*, 2d ed. vol. ii. p. 189). These were placed under better supervision by W. PITT, 1785, and were intended to be taxes on "luxuries." Hair powder and armorial bearings were afterwards added. The sporting and dog duties, though not included among assessed taxes, may be considered as of an analogous nature. Some of these taxes, as those on horses and hair powder, have been remitted, but the principle of taxing luxuries has been maintained, though not unfrequently modified, in our fiscal system (see TAXATION, TAXES, etc.)

[Dowell, *History of Taxation and Taxes in England*, 4 vols., 1888, 2d ed.]

ASSESSMENT. The official valuation of income or property for the purposes of taxation. The word is sometimes used in another sense, viz. the amount of a tax a particular person has to pay. It was also applied to certain taxes on lands and goods levied during the commonwealth, and which Dowell (*History of Taxation*, London, 1888, iii. p. 72) says formed the link between the SUBSIDY of the Tudor and earlier Stuarts and the PROPERTY TAX of William III. Where a tax has to be levied on property or on income, the amount of such property or income must be ascertained, and this is by no means an easy task. Even then the principles of taxation may require certain allowances to be deducted before the taxable property is ascertained. In some cases the assessors are officials, in other cases they are elected directly or indirectly by those who pay the tax.

1. *Imperial Taxation.*—In the case of imperial taxes, assessment is required for the LAND TAX, the INCOME TAX, and the DEATH DUTIES. The amount of the land tax payable by each parish is fixed by statute, and each parish raises its quota by a rate on the yearly value of all lands and hereditaments. The great increase in the value of land in many parishes has greatly diminished the rate per £ necessary to raise the quota in such parishes. In others the rate per £ has been specially limited and the shortage on the quota finally remitted. For Income Tax, landed property, houses and buildings are assessed at the yearly rent they are worth, where the owner bears the cost of repairs sufficient to keep the premises in a state to command that rent. Where the occupier is also the owner, some difficulty often

exists in fixing the yearly value, because there may be no rented property close by to serve as a test, or the house, *e.g.* a mansion, is not one which could easily be let "by the year." Perhaps the soundest principle is to take a percentage on the selling value as the estimated rental. On profits from occupation of land the assessment is twice the rent (subject to rectification if the profits are less), no deduction being allowed on account of repairs. Returns are made by the occupiers, and on such returns the assessment is made. Income derived from public funds or from public offices is assessed at the amount received, and the tax is deducted where possible before the income is paid. Income derived from professions, trades, and other occupations is assessed upon the average profits of the preceding three years, but official salaries and other forms of income are assessed at the amount actually received. A single person's income, wholly earned, not exceeding £150 is exempt; from investments £135 is exempt. A married couple with £250 from earnings or £225 from investment are exempt. Liable incomes have one-tenth of earned incomes deducted, then £225 exempt, and £225 at half-rate. Allowances for children are also made: £36 for the first and £27 each for any others (without limit of age if the "child" is receiving whole-time education. By the process of allowances "taxable" income is reduced to "assessable" income. Incomes over £2000 pay a super-tax on a graduated scale.

2. *Local Taxation.*—Taxes required for local purposes, such as the poor rate, the county rate, the borough rate, are levied upon the full rateable value, with certain exceptions that are based on no definite principle. Certain lands are assessed to the general district rate at one-fourth the rateable value, whilst owners of small tenements, if they compound for the rates, are assessed at one-half the rateable value. The rateable value for the poor rate which is conclusive for the majority of rates, is defined by the 6 & 7 Will. IV. c. 96, as "the net annual value of the several hereditaments rated thereto; that is to say, of the rent at which the same might reasonably be expected to let from year to year free of all usual tenants' rates and taxes and tithe commutation rent-charge, if any, and deducting therefrom the probable average annual cost of repairs, insurances, and other expenses, if any, necessary to maintain them in a state to command such rent." The provisions of 6 & 7 Will. IV. c. 96, do not, however, apply to the metropolis. In the metropolis the gross value is taken as the basis of the assessment for the purpose of ascertaining the rateable value, and deductions are made which vary according to the nature of the tenement, a maximum percentage being fixed for the deduction in each case. Land occupied by the crown for public purposes, property unoccupied or not capable of yielding any rent, and personal property, are not rateable. (As to the taxation of ground rents, see GROUND RENTS.) The basis of the county rate is ascertained in a similar way, but the assessors are not bound to follow the poor-rate assessment (see COUNTY RATE). By the bill introduced by GOSCHEN in the House of Commons on the 3d April 1871 it was proposed to render "every hereditament, corporeal or incorporeal," with the exception of rent-charges, liable to be rated to all local taxes (see *Local Taxation*, by G. J. Goschen, London, 1872; and the Report of the Select Committee of the House of Commons on Local Taxation, 1871).

[See *Local Government and Local Taxation*, by R. S. Wright and H. Hobhouse.—*Law of Rating*, by Castle, Ryde, Faraday.—*British Incomes*, by Sir Josiah Stamp.—*Income Tax*, by Prof. Seligman. (For assessment for general average, see ADJUSTMENT, AVERAGE; AVERAGE, MARITIME.)]

J. E. C. M.; J. C. S.

ASSETS (Lat. *ad satis;* French *assez*); literally, sufficient. Originally the use of the word was confined to property which an executor or heir could apply for the discharge of the debts and legacies due from the estate of a deceased person. These obligations could only be enforced in so far as the property available for that purpose was sufficient. The application of the expression was afterwards extended to the property which could be applied for distribution among the creditors of an insolvent debtor, and in course of time acquired the still wider meaning of any person's property in so far as it could be used for the discharge of his liabilities. The assets remaining after the discharge of liabilities are a person's actual capital.

ASSIENTO TREATY. This treaty requires mention, owing to the connection between it and the development of slavery in North America. In 1713 Spain by agreement (Assiento) conceded to France the privilege of carrying negro slaves to the Spanish colonies. France, by the treaty of Utrecht, surrendered this privilege which, by the treaty de l'Assiento, was granted to England for thirty-three years from the 1st May 1713. England engaged to furnish 4800 slaves annually, and in return was entitled to send two ships every year with negroes to America. The SOUTH SEA COMPANY obtained the benefit of this monopoly. At the outbreak of the war with Spain, the Assiento was suspended, but it was renewed in 1725 and again in 1748.

[The leading clauses are set out in Hosack's *Law of Nations*, London, 1882, p. 355, and are taken from *Actes et Mémoires de la Paix d'Utrecht.* See also *Histoire des Traités de Paix*, par F. Schoell, p. 214 (Brussels, 1837).]

J. E. C. M.

ASSIGNAT (from Lat., *Assignatus*). The PAPER MONEY issued by the French republic in 1789-94, in consequence of the scarcity of coin, was termed assignats because it was secured,

not upon coin, but upon crown and church property, in the purchase of which these notes were receivable at par. Each note was of 100 francs (£4), and notes returned to the state in payment of purchase money were to be cancelled. The first issue of 400,000,000 francs carried interest at a daily rate (as exchequer bills did here prior to 1862), but were inconvertible except in payment for property publicly assigned for the purpose. A second issue of 800,000,000 francs carried no interest, and further issues effected rapidly brought the total up to 3,750,000,000 francs, or £150,000,000, nominal. At that time, in August 1793, the depreciation of the assignat had become so great, it being quite impossible for the country properly to absorb this vast amount of paper, that the 100 francs nominal ranked for less than 20 francs coin. Then recourse was had to protective legislation. First, May 1793, a decree was issued that farmers must declare the quantity of corn in their possession, and sell it in recognised markets, no one being permitted to purchase more than sufficient for one month's consumption. Then maximum prices were decreed, and as such laws could not rehabilitate the assignats, a forced loan of 1,000,000,000 francs, and the forced prepayment of taxes, were applied to the reduction of this paper currency. In this way the total was brought down to about 2,500,000,000 francs. But the wants of the government were so pressing that but a few months had elapsed before these notes had been reissued, and a far larger amount followed. In June 1794 the assignats in circulation reached the vast total of 6,536,000,000 francs, or £261,440,000, nominal. The result of legislation then was that the land remained untilled and all business was paralysed. At this time the 100 francs assignat was not worth 1 franc, and though, after the fall of Robespierre, the maximum laws were relaxed, the value of the assignats did not recover. The government and the entire country had been reduced to a state of pauperism, and when, in October 1795, the Directory had been established, the total issue reached 22,000,000,000 francs, or £880,000,000, nominal. Yet in two months another 15,000,000,000 francs were issued, and the depreciation was such that the paper became entirely valueless. Then followed the conversion of the assignats into *mandats* (or warrants) at the thirtieth part of their face value, and these in their turn were returned to the state in 1796 at about the seventieth part of the value of coin. Thiers' *History of the French Revolution* gives a vivid description of this eventful period, and of the disastrous effects of these issues of inconvertible paper.

In Russia in the early part of the 19th century an issue of paper was made similar in form to the assignats in France and became greatly depreciated. These notes were subsequently to a large extent withdrawn.

Professor F. A. WALKER has in his work on *Money* (ch. xvi.), described the development of the paper issue, and the fruitless opposition of NECKER. It was assumed that the republic could do safely what had been (1719-21) disastrous under the monarchy. "Paper money," it was argued before the assembly, "paper money under a despotism is dangerous, it favours corruption; but in a nation constitutionally governed, which takes care of its own notes, which determines their number and their use, that danger no longer exists." A desire to commit the thrifty middle class of France to the principles and measures of the Revolution for political purposes largely actuated the assembly. This was avowed by Mirabeau, "Partout où se placera un assignat-monnaie, là sûrement reposera avec lui un vœu secret pour le crédit des assignats, un désir de leur solidité . . . partout où se trouvera un porteur d'assignats, vous compterez un défenseur nécessaire de vos mesures, un créancier intéressé à vos succès." These notes, the Comte de MIRABEAU continued to declare, could never be issued in excess. "They represent," he said, "real property, the most secure of all possessions, the soil on which we tread." Again, "There cannot be a greater error than the fear so generally prevalent as to the over-issue of assignats. . . . Re-absorbed progressively in the purchase of the national domains, this paper money can never become redundant."

The following table of the depreciation of the assignats, derived from M. Bresson (*Hist. Financière de la France*), shows how entirely Mirabeau's anticipations were falsified by events.

24 livres in coin were worth in assignats—

April 1, 1795	238	Oct. 1, 1795	1205
May ,, ,,	299	Nov. ,, ,,	2588
June ,, ,,	439	Dec. ,, ,,	3575
July ,, ,,	808	Jan. ,, 1796	4658
Aug. ,, ,,	807	Feb. ,, ,,	5337
Sept. ,, ,,	1101		

At the last, "an assignat professing to be worth 100 francs was commonly exchanged for 5 sous 6 deniers, in other words, a paper note professing to be worth £4 sterling passed current for less than 3d. in money" (Twiss, *Progress of Political Economy*, p. 263).

M. Joseph GARNIER gives (*Traité de Finances*, p. 408), the following statement from a work of M. Ramel, former minister of finance. The figures represent millions of francs.

Assignats créés par l'assemblée constituante (lois des 21st Déc. 1789, 17th Avril 1790, 19th Juin 1790)		1,800
,, ,,	par l'assemblée legislative	900
,, ,,	directement par la Convention	7,278
,, ,,	par les Comités autorisés par le Directoire	33,603
		43,581

M. Bresson gives a total differing by only two or three millions from the above (see *Money*, by Francis A. WALKER, pp. 336-347, for further details). See CHAMBERLEN, H. ; LAW, J.

ASSIGNATION (Scots law term). Assignment.

ASSIGNEE. One to whom a right or property is transferred. The term "assignee in bankruptcy" is not used under the present bankruptcy law, but there is an "official assignee" on the London stock exchange on whom certain duties devolve in the case of the insolvency of a member.

ASSIGNMENT. The transfer of a right or property. In strict legal phraseology the word is used with reference to personal property only. It is correct to speak of the assignment of a lease, but the term could not be applied to the transfer of freehold property.

ASSIGNMENT, DEED OF. This expression, though it might be used for every deed assigning property, is more specially applied to instruments by which a debtor's property is conveyed or assigned to a trustee for the benefit of his creditors generally. An assignment of this nature is considered an act of bankruptcy (Bankruptcy Act 1883, § 4 (*a*)). E. S.

ASSIGNOR. One who transfers a right or property.

ASSIZE OF BREAD AND BEER. In the collection of ancient acts of parliament, two are always cited as of indefinite antiquity, neither reign nor date in which they were first enacted or promulgated being given, or indeed discoverable. These are the statute on weights and measures, and the assize of bread and beer. It is highly probable that these statutes are declaratory of very ancient custom, and were necessarily reduced to a form because they each represent rules exhibited in figures. They are constantly copied in those legal handy books which lawyers possessed and referred to, and of which some still survive, dating occasionally from the 13th century. It was at first the duty of the local court (that of the MANOR), to enforce the assize, and the records of those courts contain frequent entries of fines levied on those offenders who had broken the assize.

The assize of bread and beer is drawn up in the form of a sliding scale, the price of the unit (in bread, the weight of the unit) varying with the price of grain by the quarter, wheat and malt as the case may be, information as to the price having been easily procurable from market rates. The scale of prices goes beyond recorded experience of cheapness or dearness, at least as far as the writer has registered prices. The assize was therefore a regulation by ancient custom or law of the rate at which baker and brewer should be remunerated for the service which their labour did to society. The uniformity of this practice was the justification for other and subsequent statutes regulating the price of labour, statutes which were enacted and re-enacted from 1349 till 1824, at which latter date the labour statutes were repealed *en masse*. After the discipline of the manor court had become obsolete, the assize of bread and beer was enforced in quarter sessions uncertainly, but by the corporations of towns regularly into the last quarter of the 18th century, the archives of these corporations constantly supplying evidence of wheat and malt prices. The assize of bread and beer proves indirectly that the traditional food of the English was wheaten bread, and their drink barley beer, for the assize was a law which was operative all over England from the Scottish border to the Channel. It is to be observed that, except on very rare occasions, the legislature or the government did not affect to fix the price of the materials, wheat and malt, as foreign governments, especially that of France, habitually did. The regulation, too, was avowedly in the interest of consumers, for the rolls of parliament and the statute-book supply abundant evidence of the anxiety with which the government foresaw and provided against artificial dearness. Later experience has inferred that their remedies were nugatory, or even mischievous, but there can be no doubt as to their motives. In brief, the assize of bread and beer had the same object with the laws directed against BADGERS ; FORESTALLERS AND REGRATORS, viz. the protection of the consumer.

J. E. T. R.

ASSIZE OF WEIGHTS AND MEASURES. Besides the assize of bread and beer, weights and measures, and the articles themselves which were thus computed, were subject to similar legislation. Thus innkeepers, licensed victuallers, vintners, butchers, and others were subject to regulations of the same class. The "inholders" were to use measures "a small quantity bigger than the standard" to allow for the "working and ascending of the Yest and Froth," and, with the "Cooks and Victuallers," were "forbidden to bake, seeth, or roast, any Fish or Flesh twice, or sell and utter unto the subjects any manner of corruptible Victuals, which may be to the hurt and the infection of Man's body"—their "excessive price" was guarded against, and a scale appointed at which horses were to be received "to Livery at Hay and Litter by Day and Night." If the price of hay was 31s. 6d. a load, the calculation was as follows :—

"Then if the Botel of Hay shall weigh three Pounds for a halfpenny, which is six Pound for one penny, and so 18 Pounds of Hay for three pence, the which 18 Pounds of Hay, with reasonable Provender at every watering, will suffice one Horse Day and Night." The rate for litter being fixed in proportion, it was considered that the "Inholder" would have 'sufficient gain." The rates were to vary according as the

price of the "Load of Hay shall yearly increase and diminish." The rules for the butchers were more particular. These were "most carefully looked into and provided for by good and ancient Orders and Laws of this Realm, and also by Advice of the learned and skilful Physicians of the same;"—the Butchers were to take the utmost care that the meat was to be wholesome, they were not to "kill and sell any Bull or Bulls unbaiten." The weight also was to be exact and true. They were not to "sell their Flesh, with any Beam or Balance inclining more unto one end than to the other"; "Musty and Corrupted Meat" was also strictly guarded against. Similar regulations were also extended to other articles. "The Assize of Fuel, to be observed in the City of London, Westminster, and the suburbs of the same," fixed the size and weight of the sack of charcoal, the billet, and the faggot, requiring each "Faggot-band to contain in length three foot, and the Band of every such Faggot to be 14 inches about, besides the knot." Among the punishments for these offences was the pillory, the fraudulent butcher to be exposed there, and "his corrupt flesh to be burnt openly before his place in the Market-place," the fraudulent seller of fuel with a "Billet, Faggot, or Sack of Coals bound to some part of his body." Besides articles of this class, building materials were subject to similar regulations; the dimensions of lath, timber, and tiles were strictly laid down, and directions even given as to the manner in which the earth of which the tiles were made was to be worked. These regulations, together with those which regulated the assize of bread and beer, may be found described in *The Assize of Bread and other Assizes of Weights and Measures*, to which the name of John Powel, clerk of the market, originally of the king's (James I.) household, is attached. Reference is made in this to the order in council 31st January 1604, in which the whole question was reconsidered. The edition from which the quotations made above are made contains references to the early acts of parliament, etc., and is dated 1714. It is interesting as giving incidentally a vivid picture of "state regulation" in early ages.

[An account of the assize of bread, meat, and other necessaries in Germany is given by Rohrscheide in *Jahrbücher für Nationalökonomik*, October 1888.]

ASSUMPTION, Deed of (Scots law term). Deed of appointment of new trustees.

ASSURANCE. See Insurance.

ASSYTHMENT (Scots law). Damages suable at common law by wife, family, or relatives of person killed, from person culpable, though not convicted and punished, the assythment being both a consolation and an indemnification for pecuniary damage. A. D.

ATELIERS NATIONAUX, government workshops, tried in France 1848, with the object of affording relief, in the form of wages, to the unemployed. The name is inexactly given to (1) the old *ateliers de charité*, which gave employment and a small wage, often in kind, to destitute workmen; (2) Louis Blanc's proposed *ateliers sociaux* or state-supported co-operative productive societies.

On the 25th February 1848, the day after the abdication of Louis Philippe, the provisional government, under urgent popular pressure, published a decree undertaking to guarantee a livelihood to every one who would work, and therefore to find labour for any citizen. Three days later public works were proclaimed to begin from 1st March; every one in want of employment was invited to apply to his mayor, who would immediately direct him to the national workshops. So precipitate was this step that no workshops could be found, nor any works except some trifling road repairs and navvies' jobs. To gain admittance to the "workshops" a man procured from his landlord a certificate of six months' residence in Paris, had this visaed by the local police, and exchanged it at the *mairie* for an admission ticket. The pay was two francs a day. When the number employed reached 6000 no work could be found for more. After vainly applying at each district, and having their admission tickets endorsed accordingly, men were paid 1½ frs. daily. Two central bureaux were opened to avoid the inconvenience of visiting each district. When the lack of work became notorious, men in regular work attended these bureaux, and drew 1½ frs. without quitting their own employment. Unscrupulous men obtained certificates from two landlords, and drew double pay. Moreover the "inactive" men formed angry crowds around the bureaux, endangering public order and alarming the government.

At this stage (3d March), a young chemist, M. Émile Thomas, suggested that the men should be brigaded so as to assure regularity, centralise relief, and prevent double inscriptions, while a free registry should facilitate their employment by private persons. His plan was approved, and he was appointed director (6th March). He embodied ten men in a squad, five squads in a brigade, four brigades in a lieutenancy, and four lieutenancies in a company. Each division was under an officer eventually elected by his subordinates. A company, therefore, numbered 900 men. A *chef de service* commanded three companies, a *chef d'arrondissement* a district. The daily pay was: cadets, *élèves* is the original word, 5 frs.; these were students chosen by Emile Thomas from his old school the *École Centrale des Arts et Métiers*, where they were training for civil engineers, etc.; lieutenants, 4 frs.; brigadiers, 3 frs.; heads of squads, 2½ frs. (active), 1½ frs. (inactive); men, 2 frs. (active), 1 fr. (inactive).

By dint of tact and energy, M. Thomas maintained order. This was all he had under-

taken to do. He could not procure work. The government, glad to be momentarily rid of peril, turned a deaf ear to his appeals. He set some of the men to make shoes and clothes for others, but such small expedients availed little. His numbers steadily swelled, being: 21st March, 30,000; 16th April, 66,000; 15th May, 100,000; 25th May, over 115,000. The needy and criminal classes flowed in from all parts of France, and even from Belgium, and easily obtained false certificates of domicile. Ministers and influential men constantly pushed their friends and supporters into appointments as officers. 600 actors, artists, and clerks claimed in one day the right to employment. The expenses grew rapidly, but the government had political aims in view. At one time it counted on the *ateliers* for support at the polls; at another a minister spoke of using the men in the streets in case of a rising; yet again it was hinted that collapse would be useful in damaging the party of Louis Blanc, whose principles of *l'organisation du travail* and *le droit au travail*, were supposed to be bound up with the experiment (see BLANC, LOUIS). The jealousy of the official engineers still starved the *ateliers* of work. So futile were the tasks set the men that one of them sarcastically predicted they would be set to bottle off the Seine! After the elections, the government became alive to the expense and political danger of the growing agglomeration. The director was ordered (23d May) to dismiss immediately all bachelors under twenty-five who would not enlist in the army, all men who could not prove six months' residence in Paris, and all who refused offers of private employment in their own trade. Day work was to give way to task work; and men were to be liable to be drafted into the provinces. M. Thomas protested that this ordinance was harsh, dangerous, and contrary to the previous decree of the whole government (25th February, *supra*). It was withdrawn for a time. But on the 20th June (M. Thomas having, meanwhile, been superseded) it was approved by the national assembly, and published. The workmen revolted at once throughout Paris. The *ateliers* were dissolved, and the rising was suppressed by troops after three days' fighting (23d to 25th June), during which 10,000 men were killed and 12,000 captured.

The *ateliers* were evidently not fairly tried. But they are open to fatal political and economic objection. A heterogeneous crowd of social failures employed in indefinite numbers by a party majority must seriously endanger political morality. Louis Blanc would have each man engaged at his own trade. Obviously, however, this replaces private enterprise by pure socialism. MILL (*Dissertations*, ii. 384) contends that the right to labour depends upon the same principle as the poor law of Elizabeth. But is the state fitted to discharge the correlative duty of employment? Taxing and trading are widely different functions. Fawcett (*Manual*, p. 586) considers that government might *possibly*, though rarely, be justified in giving employment during occasional depression.

[Consult *Histoire des Ateliers Nationaux*, par Émile Thomas, Paris, 1848; well condensed in the *Quarterly Review* for June 1850 (vol. lxxxvii. No. 173).—*Rapport de la Commission d'Enquête sur l'Insurrection du 23 juin, et sur les évènements du 15 mai 1848*, Paris, 1848.—*Histoire de la Révolution de 1848*, par L. A. Garnier-Pagès, Paris, 1861-72.—*1848 Historical Revelations*, Louis Blanc, London, 1858.] H. H.

ATKINSON, WILLIAM, born towards commencement of 19th century, was a Fellow of the Statistical Society, from which he retired in 1844. One of the early assailants of the classical school, he lays great stress on its inability to agree upon questions of population, of the preference of home over foreign trade, and its want of moral and religious principle. Though his own arguments in favour of protection are founded upon a rather abstruse "law of proportions," they have been welcomed by American economists. His last work gives curious details upon the influence of the orthodox school on commercial politics in England.

The Principle of Protecting Home Trade or the Principle of Free Trade Refuted, 1833.—*The State of the Science of Political Economy investigated*, 1838.—*Principles of Political Economy*, 1840 (reprinted 1843, New York, with an introduction by Horace Greeley).—*Principles of Social and Political Economy*, vol. i. (and last) 1858 (see CLASSICAL ECONOMISTS). S. B.

ATTACHMENT. 1. The legal seizure of a debtor's property. In the Rules of the Supreme Court the term is used for the process by which a judgment creditor tries to secure for himself the judgment debtor's money claim against a third party (called the GARNISHEE). The Court may, on satisfactory proof that the judgment remains unsatisfied, and that the garnishee (who must be within the jurisdiction) is indebted to the judgment debtor, order the garnishee to pay the applicant to the extent of his claim. A peculiar process (called *foreign* attachment), by which any part of a debtor's property may be seized *before* judgment, is available for creditors whose claims have arisen within the city of London, through the instrumentality of the Lord Mayor's Court.

2. A writ of attachment against a disobedient party is used in the supreme court for the enforcement of—(1) judgments for the recovery of any property other than land or money; (2) judgments for payment of money into court if the liability is within the exceptions of the Debtor's Act; (3) judgments or orders against corporations wilfully disobeyed by the directors or officers; (4) orders to answer interrogatories, or for discovery or inspection of documents, and in several other cases. The disobedient party

is imprisoned until his discharge is ordered by the court. E. S.

ATTESTATION. The verification of a document by the signature of a witness or witnesses who were present at the time of its execution.

ATTORNEY, POWER OF. A document generally authorising an agent to act for his principal.

ATTORNMENT. An acknowledgment of tenancy by the tenant to a landlord. The purchase of land subject to leases was formerly incomplete till the lessees had attorned to the purchaser; but this was rendered unnecessary by the statute 4 & 5 Anne, c. 3. It was formerly usual to insert attornment clauses into mortgage deeds, so as to create a tenancy between the mortgagor and the mortgagee, and to give the latter a landlord's preferential rights. A clause of this nature would now mostly be futile unless the forms required by the Bills of Sale Acts of 1878 and 1882 are complied with; and as it exposes the mortgagee to certain special liabilities, it is considered more prudent for mortgagees to omit it. E. S.

ATTWOOD, THOMAS (born 1783, died 1856), belonged to a Birmingham firm of bankers during the first half of last century. The Birmingham Currency School, to which he belonged, were, as mentioned by J. S. Mill (*Principles of Political Economy*, bk. iii. ch. xiii. § 5). strong supporters of inconvertible currency, Thomas Attwood wrote the following pamphlets: *Letter to N. Vansittart on the Creation of Money and on its Action upon National Prosperity*, Birmingham, 1817, 8vo.—*Observations on Currency, Population, and Pauperism*, Birmingham, 1818, 8vo.—*Exposition of the Cause and Remedy of the Agricultural Distress*, Hertford, 1828, 8vo. Evidence of Thomas Attwood before the Select Committee on the Depressed State of Agriculture, 1821, Parliamentary Papers, viii. pt. ii.—*Scotch Banker*, 1828, embodying six articles on banking and currency contributed by Thomas Attwood to *The Globe* (reviewed by Cobbett in his *Political Register*, for 24th May 1828, and noticed by the *Quarterly Review*, No. 78).—Letters of Thomas Attwood to the *Times* [and comments of the *Times* thereon, Oct.-Dec. 1843.] H. R. T.

ATTWOOD, THOMAS, AND THE BIRMINGHAM SCHOOL. Thomas Attwood is a signal example of good sense and general intelligence overborne by a futile monetary theory. He was the leader of the "Birmingham School," who advocated high prices maintained by inflation of the currency. Attwood and his followers taught a lesson needed by some of their contemporaries when they insisted on the hardship inflicted on debtors by a fall in general prices, or rise in the value of the monetary standard. But the extent of the evil was greatly exaggerated when the RESUMPTION OF SPECIE PAYMENTS in 1819 was made responsible for almost every trouble which subsequently befell the kingdom—the agricultural distress in England, the turbulence of O'Connell in Ireland, or the "Rebecca" riots in Wales. The argument directed against the resumption deserves particular attention. It was held that the depreciation of paper with respect to gold just before the resumption was much less than the appreciation of gold with respect to things in general which followed the resumption. "That measure (which it was said would only effect a charge to the extent of 3 per cent) had imposed an additional burthen of 25, 30, or 40 per cent on every man in the community in all cases of deed, mortgage, settlement, or contract." Prof. Walker appears inclined to ascribe some weight to this argument (*Money*, p. 388; *Money, Trade, and Industry*, p. 282).

Thomas Attwood's advocacy of monetary reform derived strength from his political influence. He was the founder of the "Political Union" at Birmingham and took an active part in the agitation for parliamentary reform. It was believed that Attwood desired political reform principally as a means whereby to obtain a rectification of the currency. To that end he moved in the reformed parliament for a select committee to inquire into the causes of the general distress. This motion, like others which emanated from the Birmingham School, was lost.

Thomas Attwood was greatly assisted in this monetary crusade by his brother Mathias (born 1779, died 1851). Mathias's speech on the currency, 11th June 1822, is placed by Alison with Huskisson's speech on the other side, as "containing all that ever has, or ever can be, said on the subject." In 1830 Mathias proposed a double standard of silver and gold; at the rate of $15\frac{2}{10}\frac{8}{0}\frac{8}{0}\frac{8}{0}$ lbs. of silver to 1 lb. of gold (Hansard, 1830, vol. xxv. pp. 102-145; Alison, *History of Europe*, 1815-52, vol. iv. ch. xxii. § 32). Mathias, unlike his brother, was a Tory. He was a successful banker, co-founder of the National Provincial Bank of Ireland, the Imperial Continental Gas, and other companies. So little is business power alone a guarantee of sound economical theory.

There is an appreciative account of Thomas Attwood and the Birmingham School in a series of letters which were addressed to the *Midland Counties Herald* in 1843 by two Birmingham men (T. B. Wright and J. Harlow) signing themselves *Gemini*, and were republished in 1844 in the form of a book under that title. The title *Gemini* was appropriate according to Sir Robert Peel, for "the efforts of no single writer are equal to the production of so much nonsense" (Speech on the Bank Charter, 1844). According to this *par nobile* "the political economy of Mr. Attwood has this one great distinguishing feature, that it releases the nation from the thraldom of the heart-chilling doctrine of Malthus. The world is capable of multiplying its production to an

almost unlimited extent; the governments of the world would have only to provide for the proper distribution of the productions, and the wants of all people will be supplied." Such are the beneficent results of "accommodating our coinage to man, and not man to our coinage" (*Gemini*, Letter 24). The cardinal tenets of the "Birmingham economists" are compendiously stated at page 104, and again at page 285 of *Gemini*.

There is in the library of the British Museum a life of Thomas Attwood by his grandson, C. M. Wakefield, "printed for private circulation;" which throws much light on the history of the Birmingham School. Mr. Wakefield does not profess to interpret his grandfather's views on currency.

J. S. Mill devotes a paragraph to the refutation of Attwood's theory of currency (*Pol. Econ.*, bk. iii. ch. xiii. § 4). F. Y. E.

AUBAINE, Droit d'. Under the French rule of law, known as the *droit d'aubaine* or right of alienage, the whole property of an alien dying in France without leaving children born in that country escheated to the crown. The royal right was not universally exacted, and at a very early period special exceptions were introduced in favour of certain classes. Thus Louis XI. exempted merchants of Brabant, Flanders, Holland, and Zealand from the operation of the law, and a similar privilege was extended by Henri II. to merchants of the Hanse towns, and from Scotland. Henri IV. and Louis XIV., in their desire to promote the settlement of skilled artisans in France, exempted at a later date various classes of workmen, and the latter king extended the exception to include aliens serving five years in the navy and then settling in France. The towns of Lyons, Toulouse, Bourdeaux, and some other ports in Provence and Guienne were also free from the operation of the rule.

Originally one of the rights possessed by the feudal lord, the *droit d'aubaine* or similar institutions, existed in most countries where the form of society was feudal; and the alien's power of bequest was restrained in the same manner in Tuscany, the two Sicilies, Spain, Germany, Prussia, Holland, Denmark, and other countries. Even in England the power of the crown over the goods of aliens was formerly considerable, though no strictly similar rule of law seems to have existed in this country. Treaties for the mutual abrogation of the right did something to modify the application of the law. But its complete abrogation is due primarily to the policy of Necker, who was controller-general of finance at the time when the decree of the 6th August 1790 abolished the *droit d'aubaine* and the *droit de détraction* in France. In his work *De l'administration des Finances* he had already pointed out that owing to the expenses of collection the annual net produce of the right did not amount to more than 40,000 écus. The *droit d'aubaine* in its original form was never re-established in France. But with the *droit de détraction*, which enabled the state to confiscate part of the property bequeathed by aliens, it reappeared in the *Code Civile* in a modified form. Under the provisions of sections 726 and 912 no alien could possess in France a larger power of succession or bequest than a Frenchman would possess in the alien's country. But even this relic of the old feudal right was abolished by the law of the 14th July 1819.

[Diderot et D'Alembert, *Encyclopédie*, 1772.—*Dictionnaire général de la Politique*, par Maurice Block, 1873.—*Les Codes annotées de Sirey, Edition entièrement refondue*, par P. Gilbert, 1847.—*De l'administration des Finances de la France*, par M. Necker, 1784.] C. G. C.

AUCKLAND, William Eden, first lord, the third son of Sir Robert Eden, born 3d April 1744, M.P. for Woodstock 1774, was one of the five commissioners sent to America in 1778. As chief secretary, 1780-82, he established the National Bank of Ireland, and was sent by Pitt to Versailles, 1785, to negotiate the commercial treaty with France, signed 1786. He was raised to the English peerage 1793, and died 28th May 1814. Among his writings are—

Four Letters to the Earl of Carlisle, London, 1779, 8vo (on public debts, credit, revenue laws, etc.; 3d ed., 1780, with a fifth letter on population).—*Short Vindication of the French Treaty*. London, 1787, 8vo.—*Substance of a Speech in the House of Peers on the Third Reading of the Bill for granting certain Duties upon Income*, London, 1799, 8vo (three editions). H. R. T.

AUCTION, Ordinary (Lat. *auctio*, an increase—because each bid is an increase on the preceding one). A public sale in which successive bidders increase the price until one offers a price which no others are prepared to exceed. The auctioneer is recognised by law as the agent both of the vendor and purchaser; he is bound to take out a licence to the amount of £10 annually; he is bound to give due public notice of the sale; to provide a properly attested catalogue; and, as a rule, the conditions of sale are printed on the catalogue. The auctioneer is forbidden to buy on his own account; and his sign of office is a hammer, the fall of which represents that the sale has been effected. It is a common practice for the actual vendor of the property put up to auction to bid until what he regards as a sufficient price for his goods has been attained, or he may place a "reserve price" upon them. Until the hammer falls the bidder may retract his bid, but when the hammer falls the contract is notified and there is no appeal upon either side. The auctioneer makes a charge for his services, which is paid by the vendor. At one time a duty was payable to the government upon the value of all auction sales, and in 1830 a revenue of £234,854 was derived from

£6,326,481 worth goods sold. But this duty has now been relinquished by the state. The conditions of sale usually contain a statement in effect that "any error or mis-statement shall not vitiate the sale, but that an allowance shall be made for it in the purchase money," but this is only held to guard against unintentional errors, not designedly misleading statements. Many descriptions of merchandise, such as wool, tallow, hides and leather, timber, hemp, wine, etc., are sold by periodical auctions, at which buyers from all parts can conveniently attend and have a good selection to purchase from. At the five series of colonial wool sales in London, wool is annually disposed of to the value of £20,000,000 and more, and many others of these auction sales are most valuable in their results and in the worth of the goods disposed of. In 1830 the auctioneers' licences issued in the United Kingdom numbered 3043; in 1913 the number issued in England and Wales was 6160, Scotland 695, Ireland 861. The business of *auctioneer* is often combined with that of *appraiser* and *house-agent*, and in 1913 these businesses together paid £87,332 to the inland revenue. The sales of real property at the London Auction Mart, in the Country and Suburbs, and by Private Contract as stated by the Estate Exchange Auction Mart, London, were in 1913, £8,574,111; 1912, £9,089,543; 1911, £8,397,794.

A Dutch Auction is a public sale in which the vendor continues to lower his prices until a bidder is found, or until in his own interest he can lower them no more. Dutch auction sometimes enables a better price for the goods sold to be obtained than ordinary auction.

[As to effect on price by employing English or Dutch mode of sale by auction, see W. T. Thornton on *Labour*, p. 47, *et seq.*, ed. 1869.]

AUDIFFRET, Ch. L. G., Marquis d', born at Paris 1787, died April 1878. He entered, when still quite young, the financial department of the government, through all the grades of which he was destined to pass with great rapidity. Originally placed, 1805, as a book-keeper in the "Caisse des dépots et consignations," he became, 1808, a clerk in the public treasury, and was appointed, 1815, director of the office of the "comptabilité générale des finances." Then, in 1829, he passed, from being director of the finances to the presidency of the "cour des comptes." He prepared in 1830 the *Rapport au roi*, which appeared in March under the signature of the Comte de Chabrol; was appointed a "Pair de France" in 1837, and in 1838 drew up the famous *Réglement de la comptabilité publique*, a subject of which he was acknowledged a passed master. In 1839 Audiffret published the *Examen des revenus publics*, (1 vol. in 8vo); in 1840 the first edition of the *Système financier de la France* (2 vols. in 8vo), in 1841, *Le Budget* (1 vol. in 8vo); in 1843 the *Libération de la propriété ou reforme de l'administration des impots directs et des hypothèques* (8vo, pamphlet), and in 1848 *La crise financière de* 1848 (8vo, pamphlet). He entered the senate in 1852, having published, 1851, an 8vo pamphlet entitled *Réforme de l'administration financière des hypothèques*. An imperial decree, 24th April 1853, appointed him to the *Académie des sciences morales et politiques*. In 1854 he published a second edition of his principal work: *Le Système financier de la France* (5 vols. in 8vo); of this a 3rd ed., also in 5 vols., appeared in 1863-64. In these were embodied all his writings on administrative questions or others. To these five volumes were added a sixth in 1870, containing parliamentary reports, éloges, etc., and in 1876 a final one, under the title of *Souvenirs de ma carrière*, an autobiography in which he shows himself to be a persistent partisan of the monarchy, without regard to the occupant of the throne. A. C. f.

AUDIGANNE, Amand, born at Antwerp 1814, died at Paris 1875. He was for many years employed at the *Ministère de l'agriculture et du commerce*; and wrote, commencing 1846, many articles in the *Revue des deux mondes*, on agriculture, trade, banking, railways, and particularly on the condition of the working classes, which had been the object of many conscientious inquiries on his part. Originally a declared Protectionist he became Liberal as time went on. In 1850 he published the *Ouvriers en famille* in the form of conversations (Paris, in 32mo, frequently reprinted), then, *Les populations ouvrières et les industries de la France* (2 vols. 1854, in 18mo, which has gone to a second edition), *L'industrie contemporaine* (1 vol. in 8vo, 1856), *Les ouvriers d'à présent et la nouvelle économie du travail* (1 vol. in 8vo, 1865), *L'economie de la paix et la richesse des peuples* (1 vol. in 8vo, 1866), *La lutte industrielle des peuples* (1 vol. in 8vo, 1867); then *Les chemins de fer aujourd'hui et dans cent ans chez tous les peuples* (2 vols. in 8vo, 1858-1862). This last is an economic and financial history of railways, principally in France, containing judicious remarks on the future of this great industry, some of which have been realised. A. C. f.

AUDIT. An audit is the examination of an account, or books of account, for the purpose of ascertaining their correctness. The word shows that such an examination originally consisted of the hearing of explanations from the person rendering the account, such as would be fitting from an agent when submitting his account to his principal. The term is now generally used in connection with the examination of accounts of public bodies or companies by persons appointed for the purpose, and accounts or books are considered as audited or proved if supported by such written evidence with regard to the transactions recorded as may, in the opinion of

the auditor, be considered sufficient to establish the correctness of the individual entries and the truth of the accounts. It has long been the habit of those responsible for the accounts of charitable institutions or publicly subscribed funds, to obtain and publish a certificate of one or more independent persons, to the effect that the accounts have been examined and found correct. Joint-stock companies also from an early period have employed the services of auditors, and the law which has grown up with regard to the management of these companies contains various regulations with reference to the audit of their accounts. The Companies Clauses Consolidation Act 1845 (8 Vict. c. 16) provides that, except where by special act auditors shall be directed to be appointed otherwise than by the company, two auditors, each holding at least one share in the undertaking, shall be elected by the company in general meeting, and that it shall be their duty to receive from the directors the periodical accounts and balance sheet, to examine the same, and confirm or report upon the accounts to be read at the ordinary meeting. The Companies Act 1862 (25 & 26 Vict. c. 89) and the great extension of joint-stock enterprise under limited liability which followed, led to greater attention being paid to the subject of audit. In the first schedule appended to that act, Table A, regulations for management are prescribed for such companies as may not have articles of association of their own framed to suit their individual requirements, and these include provisions with regard to the appointment and duties of auditors. The audit of the accounts of railway companies was the subject of special legislation in 1867, the attention of parliament having been drawn to the imperfect and erroneous accounts issued by some companies. The Railway Companies Act of that year (30 & 31 Vict. c. 127, § 30) prescribes :—

"No dividend shall be declared by a company until the auditors have certified that the half-yearly accounts proposed to be issued contain a full and true statement of the financial condition of the company, and that the dividend proposed to be declared on any shares is *bona fide* due thereon after charging the revenue of the half year with all expenses which ought to be paid thereout in the judgment of the auditors."

The Regulation of Railways Act 1868 (31 & 32 Vict. c. 119, § 12) repeals the regulation of the Companies Clauses Consolidation Act 1845 as to auditors being necessarily interested as shareholders.

The parliamentary accounts of the public expenditure of the United Kingdom—that is, of all moneys expended for the public service by the various departments of the State out of imperial public moneys—are rendered to and audited by the comptroller and auditor-general, under the Exchequer and Audit Departments Act 1866 (29 & 30 Vict. c. 39). This act, which abolished the former offices of comptroller-general of the exchequer and of commissioners of audit, defines the functions of the comptroller and auditor-general generally in regard to the examination of the public accounts; and in particular requires him, on behalf of the House of Commons, to examine and report on the "appropriation accounts" of money granted by parliament upon the annual estimates for the naval, military, and various civil services. These last-named annual accounts, and the reports of the controller and auditor-general thereon, are presented to the House of Commons at the commencement of the session immediately following their preparation, and are reviewed by a committee of the House, called the "Public Accounts Committee," who take evidence from the departments concerned, and from the TREASURY, on any points to which attention is drawn by the comptroller and auditor-general, and report their conclusions and recommendations to the House.

The procedure to be observed in an audit, and the extent to which an audit can be carried, depend largely on the character of the transactions of which the accounts which are the subject of the audit are the record. The audit of the cash account of a charity would naturally include the vouching of the payments by the written acknowledgments of the persons to whom the cash is paid, and of the receipts by the counterfoils of the printed forms filled up at the time of acknowledgment, or, if there be such, by the published list of subscriptions and donations. The auditor might obtain evidence to satisfy him that all the moneys that should have been received had been brought into the account, that the payments were correctly made and proper in their character, and that the balance of funds in hand at the date of closing the account duly existed. This should be proved by the bank pass-book supported by a certificate from the bankers. The audit in such a case might be thorough and complete.

The audit of a bank, on the other hand, cannot be carried much further than the examination of the accuracy of the balance-sheet as representing the financial position of the company at the date of the account. It would be impossible for the auditor, even if evidence were procurable, to prove the innumerable entries recording the transactions of the bank and resulting in the profit taken credit for, and his work necessarily consists mainly of an examination to ascertain that the assets and liabilities of the bank are correctly described in the balance-sheet, that the assets are taken at no more than their actual value, due reserves being made for any depreciation in the value of securities or for probable loss or bad debts, and that all the liabilities are brought into the account. The securities representing investments should be

examined at the date to which the accounts are made up; the stocks which are registered without the issue of a certificate, such as consols, bank stock, and most colonial stocks, being proved by a special letter from the Bank of England or other registering office, certifying the holding.

With railways, the abstracts of traffic from which the revenue is derived, are in all large companies submitted to the examination of a distinct department of the railway called the "audit department" which is wholly independent of the issue of tickets or the receipt of cash, and the shareholders' auditor can but accept the totals arrived at by that department as the gross earnings of the company. It is his duty to see that these are duly entered and accounted for, to examine into the correctness of the records of the company's expenditure, and more especially to satisfy himself that the allocation of this expenditure as between capital and revenue is a fair one.

It is not considered the duty of an auditor to express any opinion as to the policy of a board of directors, or to object to any outlay which the board, under parliamentary authority, or under the general powers entrusted to directors, may think fit to incur; but should any expenditure take place of an unusual character, or which, in the auditor's opinion, the directors are not authorised to make, or should the accounts be drawn up on what appears to him to be an erroneous basis, it is incumbent on him, if his views are not adopted by the board and the accounts amended accordingly, to see that the facts are laid before the shareholders.

The duties of auditing now form a very important portion of the business undertaken by chartered accountants. The variety and intricacy of present systems of account keeping make it difficult for persons, without special training and experience, to discover error and, it may be, fraud, on the part of those who draw them up, and it has become the practice of companies and other public bodies to appoint professional men for this purpose. As an instance of this tendency the statutes made for the universities of Oxford and Cambridge by the commissioners acting in pursuance of the Universities of Oxford and Cambridge Act 1877, provide for the audit of the accounts both of the universities and of all the colleges, either by professional accountants carrying on business in London or Westminster, or by persons conversant with accounts approved by the permanent secretary to Her Majesty's Treasury. It is also an increasing practice with private banks and commercial firms to have the accuracy of their books and annual balance-sheets tested by professional accountants. The rapidity of modern commercial transactions leads to the finance of business offices being entrusted more and more to salaried assistants, and, as a check on these, to the employment of independent persons to supervise the work periodically. The methods adopted by the professional accountant and his trained clerks in the examination of books, constitute a more complete, systematic, and independent audit than can be easily undertaken by a partner in the business, however conversant he may be with the work. An audit of this kind secures, as far as possible, accurate bookkeeping, the detection of fraud, correct and intelligible balance-sheets, and the proper distribution of profits or losses, and acts in not a few cases as a deterrent from crime by practically destroying the probabilities that wrong-doing will escape detection. Such firms and companies also who seek to attract business by exhibiting the sound condition of their finances, and with that object publish their balance-sheets, find it necessary to have their accounts confirmed by independent professional men, on whom a very large share of responsibility properly rests for the accuracy of the figures which they certify.

[*Auditors, their Duties and Responsibilities*, F. W. Pixley, London, 5th ed. 1889.] E. W.

AUDIT (Scots law). Taxation.

AUDIT OFFICE. The department of state, officially designated the EXCHEQUER and AUDIT department, which is entrusted with the audit and control of public accounts.

The control of public moneys has two main aspects: the control of receipts into and issues from the exchequer, and the control of accounts of persons receiving moneys from the exchequer for disbursement. In Norman times the former rested with the lower exchequer or exchequer of receipt, the latter with the upper exchequer or exchequer of account. The post of auditor of the exchequer existed in 1314: in Elizabeth's reign there was an auditor of the receipt of exchequer, and in the reign of William III. this officer was given control over the issues from the exchequer. Later the office became a political appointment, and in the early 19th century was used for political obstruction. In 1834 a comptroller-general of the exchequer was appointed, debarred from sitting in parliament and removable on an address from both houses.

The upper exchequer developed into the judicial court of exchequer and its financial functions fell into the background. In Elizabeth's reign auditors of the imprest were appointed to control the disbursements of accountants, but some departments of state had separate audit arrangements, auditors of the land revenue having been appointed as early as 1511. The ineffectiveness of the audit of public accounts led in 1785 to the establishment of a board of commissioners which assumed the functions of auditors of the imprest, and in 1799 absorbed those of the auditors of the land revenues.

Consolidation of the control of the exchequer and the audit of accounts was effected in 1867 by the establishment of the exchequer and audit department, the responsible head of which is the comptroller and auditor-general, who is appointed by the crown and is removable only on an address from both houses of parliament.

His functions as comptroller of the exchequer comprise the grant from time to time, upon requisition of the treasury, of credits on the exchequer accounts at the banks of England and Ireland, on being satisfied that these credits are not in excess of the sums granted for consolidated fund and supply services by the various acts of parliament. He also countersigns all warrants for the preparation and issue of "exchequer bonds" and treasury bills.

As auditor-general of the public accounts he examines, on behalf of the House of Commons, to whom he reports, the annual accounts of issues made from the consolidated fund and of all moneys voted in supply, the accounts of the receipts of revenue departments, as well as the accounts of stores and of shipbuilding, manufacturing, trading or commercial services conducted by public departments, and also audits other public accounts where special provision is made by statute. In the case of certain accounts not included in the above, he makes an examination under direction of the treasury.

The reports of the comptroller and auditor-general are considered annually by the public accounts committee of the House of Commons, which contains representatives of all parties, the chairman being a member of the party in opposition. The treasury gives general effect to the conclusions of the committee by a minute addressed to the several departments.

The powers and duties of the comptroller and auditor-general are defined in 29 and 30 Vic. c. 39, and 11 and 12 Geo. 5 c. 52. The scope of his criticism of departmental expenditure is indicated by his annual reports issued with the appropriation accounts of the respective public services.

[*The Law and Custom of the Constitution*, Anson, Oxford, 1908.—*Antiquities of the Exchequer*, Hubert Hall, London, 1891.—*Public Finance*, C. F. Bastable, London, 1903.]

AUDITOR OF THE COURT OF SESSION. Taxing-master.

AUGMENTATIONS, Court of. This was created in 1536 to collect and administer the property of the dissolved monasteries. It consisted of a chancellor-treasurer, an attorney, ten auditors, and seventeen receivers. A vast amount of wealth passed through the hands of this body during the next few years. In 1545 the property of colleges, chantries, hospitals, and guilds was also confiscated to the king, and its administration entrusted to the court of augmentations. But this enormous property was soon dissipated by the extravagance of Henry VIII. and of the council under Edward VI., and with its dispersal the functions of the court came to an end.

[Perry, *History of the English Church*, 1887, vol. ii.] R. L.

AUGUSTINIS, Matteo de (a Neapolitan, living in the first half of 19th century), the author of two elementary treatises of political economy; both are summaries of the leading doctrines of his time, mixed with criticisms from a moral and political point of view. He is of opinion that Free Trade ought somewhat to be restricted for moral and social considerations, and considers A. Smith's doctrines as leading sometimes to anarchy of both personal interest and human passions; nevertheless he thinks that liberty ought to be the rule, and government interference the exception. De Augustinis represents a singular intermixture of doctrines taken from J. B. Say, Dunoyer, Senior, and other liberal economists, and of doctrines taken from Sismondi and Romagnosi favourable to state interference. He is an eclectic writer, somewhat like Florez-Estrada. In the theory of value he tries to reconcile the doctrines based on the cost of production with those based on the principle of utility; but he does this in an infantine manner. This author, like Cagnazzi and many other second-rate economists, would have been totally forgotten by this time if the modern historical school and the Socialists of the Chair had not picked up and collected every trace of opposition which in course of time had manifested itself against the so-called English school, and if they had not given a renewed importance to the intermixture of moral, or political, or social questions, with economic topics. De Augustinis's *Istituzioni di Economia Sociale* appeared in 1837, Naples (tipografia Porcelli), and his *Elementi di Economia Sociale* in 1843. His best work is a critical essay on Pellegrino Rossi's lectures on political economy: *Studii critici sopra il corso di Economia pol. di P. Rossi*, Napoli, 1844. He examines in it one by one the thirty-six lectures of Rossi, making not seldom acute remarks in favour or against doctrines of Rossi. This work was originally published in a series of articles in a weekly review called *Lucifero*, and now forms a volume of 176 pages of small print in 8vo.

As statistician he is known by a series of letters on the economical condition of Naples: *Della condizione economica del Regno di Napoli*, Lettere, Napoli, 1833, Manzi. M. P.

AULNAGER. Under Richard I. it was ordered that "woollen cloths, wherever they are made, shall be of the same width, to wit, of two ells within the lists, and of the same goodness in the middle and sides." This rule was again asserted in Magna Charta, art. 35, and under Edward I. an official, called *aulnager*, was appointed to enforce it. It was his duty

to affix a stamp to all cloth as evidence that it was of the necessary size and quality. When the arbitrary regulations of Richard I. were abandoned in the 14th century, the aulnager's stamp was still used to certify the difference between any piece of cloth and the old requirements. The office continued to exist until the reign of William III., but it had ceased to be of much importance in securing customers against fraud and imposition.

[Ashley, *Economic History*, i. p. 180.] R. L.

AUNCEL, or HANDSAL weight, a kind of balance used in weighing wool. Forbidden by 25 Ed. III.

[Smith's *Memoirs of Wool*, 1747, vol. i. p. 38.] J. B.

AUSTRIAN SCHOOL OF ECONOMISTS, THE.* Among German-speaking nations the predominant school of economists has been, since the middle of last century, the historical, which seeks to reconstruct economics by the aid of history and sociology. Since 1871 its supremacy has been threatened in Austria (if not in Germany) by a group of writers who have returned to the deductive method. From their agreement in method and leading doctrines, as well as from their virtual collaboration with each other, these writers are justly regarded as a distinct school, which may (from the nationality of the chief members) be called the "Austrian" school of economists. Their method is, like Ricardo's, deductive; and, like RICARDO, they treat the doctrine of value as the cardinal point in economic theory. Their results, however, differ considerably from the Ricardian. Like JEVONS, they find the key to the problem of value in the notion of final utility. Unlike Jevons, they regard economics as having nearer affinity with psychology than with mathematics, and they are sparing in the use of mathematical illustration. They have thus made the doctrine of FINAL UTILITY (*q.v.*) intelligible to a wider circle; and have influenced economists outside of their school (for example, M. Block in France, Professor Cossa in Italy, and Professors J. B. Clark, E. B. Andrews, and S. Patten in America). It was stated in reply to enquiries in 1914 that they have practically ceased to exist as a separate School. The chief authors and works are:

Carl Menger, *Grundsätze der Volkswirthschaftslehre*, Vienna, 1871; *Methode der Sozial-wissenschaften*, Vienna, 1883; *Irrthümer des Historismus in der deutschen Nationalökonomie*, Vienna, 1884. —Friedr. v. Wieser, *Ursprung und Hauptgesetze des wirthschaftlichen Werthes*, Vienna, 1884; *Der Natürliche Werth*, Vienna, 1889.—Emil Sax, *Wesen und Aufgaben der Nationalökonomik*, Vienna, 1884; *Grundlegung der theoretischen Staatswirthschaft*, Vienna, 1887.—Eugen v. Böhm-Bawerk, *Rechte und Verhältnisse vom Standpunkte der volkswirthsch. Güterlehre*, Innsbruck, 1881; *Kapital und Kapital-zins*, vol. i., Innsbruck, 1884; vol. ii., Innsbruck, 1889.—Robert Zuckerkandl, *Theorie des Preises*, Leipzig, 1889. —E. von Philippovich, *Aufgabe und Methode der politischen Oekonomie*, Freiburg, 1886.—Robert Meyer, *Principien der gerechten Besteuerung*, Vienna, 1884; *Das Wesen des Einkommens*, 1887. —Victor Mataja, *Der Unternehmergewinn*, Vienna, 1884; *Das Recht des Schadenersatzes*, Vienna, 1888.—Johann v. Komorzynski, *Werth in der isolirten Wirthschaft*, Vienna, 1889. —Dr. E. Seidler in *Jahrb. für Nat. Oek. und Statist.*, March 1890 applies the theory of value to doctrine of legal punishments; he gives a full bibliography.—Ugo Mazzola, *Finanza pubblica* (Rome, 1890).—C. A. Conigliani, *Effetti Economici delle Imposte* (Milan, 1890).—For a criticism from a Ricardian point of view, see A. Loria in the *Nuova Antologia*, April 1890.—Compare H. Dietzel in Conrad's *Jahrb. für Nat. Oek. und Statist.*, June 1890.—See also *Quarterly Journal of Economics* (Harvard), October 1888 and April 1889. Cf. articles below on VALUE; HISTORICAL METHOD, etc. J. B.

AUTHORITIES, ECONOMIC. See POLITICAL ECONOMY, AUTHORITIES ON.

AUTUMNAL DRAIN.* A movement of coin in the autumn throughout the country, taking its origin from the season, which stimulates employment in agriculture, and sets great part of the population free for an autumnal holiday.

Statement showing autumnal movements of gold and silver coin held by Bank of England for 1881-1900—beginning of September to about the middle of November (000's omitted), thus £1772 reads £1,772,000.

Year.	Gold Coin.							Silver Coin.	
	Received from or taken for abroad on balance.		Taken for Scotland on balance.	Taken for Ireland on balance.	Received from or taken for Home Circulation on balance.		Total decrease.	Increase.	Decrease.
	£	£	£	£	£	£	£	£	£
1881	..	1772	811	430	..	788	3801	..	60
1882	..	417	838	610	..	880	2745	..	19
1883	..	413	795	180	..	873	2261	..	92
1884	..	1460	765	270	..	935	3430	..	67
1885	..	754	660	1110	..	252	2776	..	13
1886	259	..	717	330	..	891	1179	28	..
1887	353	..	575	25	..	388	630	..	57
1888	..	2513	445	420	..	689	4067	..	141
1889	..	2431	612	300	..	640	3983	..	414
1890	..	2009	616	480	..	1215	4320	..	174
1891	..	1471	478	320	..	288	2559	..	77
1892	..	1856	533	235	..	720	3344	153	..
1893	65	..	800	440	724	..	451	145	..
1894	74	..	584	300	..	780	1540	..	40
1895	..	3329	964	178	..	1213	5684	..	104
1896	..	1453	539	108	..	348	2448	27	..
1897	..	928	685	300	..	137	2050	..	4
1898	..	773	829	345	..	1523	3470	..	131
1899	..	4905	515	357	..	1149	6926	..	132
1900	..	1052	926	330	163	..	2145	..	49

A corresponding influx occurs in May and June of 2 to 3 millions. (See also *sub voce* in App.)

The effect of this autumnal pressure was described, 1857, by the late Mr. William Langton to the Statistical Society of Manchester (*Transactions*, Session 1857-58), and the investi-

gation was carried on, with his accustomed ingenuity and research, by Prof. W. S. Jevons, 1866 (*Statistical Society of London Journal*, vol. xxix.) The pressure appears to be enhanced somewhat by the requirements of the Bank Act of 1844, in consequence of the movements in the Scotch and Irish issues. On average, for the years 1846-1900, the rate of discount charged by the Bank of England was higher during the autumn months, and particularly in November, in connection with this movement. A somewhat similar influence is traceable in the returns of the banks of France and Germany.

[Jevons, *Investigations in Currency and Finance*, London, 1884.—R. H. Inglis Palgrave, *Bank Rate in England, France, and Germany, 1844-78*, London, 1880.—See also R. H. Inglis Palgrave, *Evidence before Select Committee of House of Commons, Banks of Issue*, 1875.—*Notes on Banking*, R. H. Inglis Palgrave, London, 1873.]

AUXIRON, Claude François Joseph d' (*b.* 1728, *d.* 1778), an engineer and physiocratic economist; was author of the anonymously published—

Principes de tout Gouvernement, ou Examen des causes de la faiblesse ou de la splendeur de tout état considéré en lui-même et indépendamment des mœurs, 1766. F. Y. E.

AVERAGE.* In the most familiar application of the term the average of a given set of quantities denotes their sum divided by their number, their arithmetic mean. More generally an average may be defined as an intermediate value derived from a given set of quantities by a process such that, if all the quantities were equal, the derivative quantity would coincide with the given ones. For example, if a, b, c, etc., are given quantities in number n, then the expression $\sqrt{\frac{a^2+b^2+c^2+\text{, etc.}}{n}}$ is an average. Of the forms included under this definition the number is infinite. The following four appear to be most important: (1) the arithmetic mean above defined;—(2) the geometric mean, formed by multiplying n quantities together and extracting the nth root;—(3) the median, which is such that, if the given quantities be arranged in the order of their magnitude, there shall be as many of them above as below the median;—(4) the mean value distinguished by Fechner as "dichteste Werth," and by De Venn as the "maximum ordinate average," which is such that in its neighbourhood the given quantities cluster most densely.—Varieties of these species arise when, instead of allowing to each of the given quantities an equal part in forming the average, we assign more importance to some of the data than to others.

In choosing among these different species and varieties, attention must be paid to two rather subtle distinctions. First, in taking an average we may have in view some special purpose as distinguished from the general objects of art and science. Suppose, for instance, our object is finding the average variation of prices is to ascertain how much the monetary value of a specified set of articles, say the necessaries of a labouring man, has varied. This specific object is evidently correlated with a qualified or weighted arithmetic mean. But, if the average stature for each of several districts were required, in order to investigate whether there is any connection between height and food (or other attribute), there is no longer the same presumption in favour of the arithmetic mean. Possibly the third or fourth species of average might be better. Again, the average may or may not be designed to represent something outside and behind the given numbers. Thus in taking the average of several independent estimates of the number of coins in a country, our *quæsitum* is an objective thing, the real amount of coin. Less substantive, but still extraneous to the given statistics, is a species of *quæsitum* more common in social science, which may be described as that mean value towards which tends the average of the *complete series*, of which the given statistics are only samples. Thus, in taking the average of a given set of price-variations, we may aim at ascertaining, as far as possible, what would be the mean variation of prices, if we could complete the whole series of statistics out of which we have only selections.

The general result of these considerations is on the one hand, in many cases to add some reasons in favour of the arithmetic mean besides the obvious grounds of familiarity and convenience, and, on the other hand, in certain cases to show that one of the other species of average is preferable (see Adjustment, Average; Average, Maritime).

[Bertillon, "Moyenne," *Dictionnaire Encyclopédique des Sciences Médicales*.—Edgeworth, "Observations and Statistics," *Transactions of the Cambridge Philosophical Society*, 1885.—"The Choice of Means," *London Philosophical Magazine*, 1887.—"Some New Methods of Measuring Variation of Prices," *Journal of the Royal Statistical Society*, 1888.—Galton and Macalister, "Law of the Geometric Mean," *Proceedings of the Royal Society*, 1879.—Lexis, *Massenerscheinungen*.—Messedaglia, "Calcul des Valeurs Moyennes," *Annales de Démographie Internationale*, 1880 (translated from *Archivio di Statistica*).—Venn, *Logic of Chance*, 3d ed., chaps. xviii. and xix. See also the older authorities, Laplace, Quetelet, and others, referred to by the above-named writers.] F. Y. E.

AVERAGE (Maritime), is the custom that all parties concerned in the adventure of a vessel at sea are liable in equitable proportion to contribute their shares of losses (particularly those arising from "jettison" or the throwing overboard of cargo to lighten the vessel) and of expenses, when such losses and expenses are incurred for the common good by one or more of the adventurers. Although this custom is

not expressly set forth in the most ancient sea-laws, owing perhaps to the then infrequency of joint-stock adventures at sea, it came at length to be so fully and clearly adopted in the laws of Rhodes as to commend itself in its integrity to the founders of the Roman civil law, and afterwards, with occasional modifications of no very great importance, by all commercial countries, from the date of the Pandects down to the present time. The chapter of the digest *De Lege Rhodia de Jactu* (xiv. 2) gives full details. The following is the illustrative example it contains: "Wherefore, if two men should each of them own a hundred parts in the cargo, and Caius, the owner of the goods thrown overboard, shall own two hundred, Caius, on a loss of the cargo, should receive fifty from each of them: losing his other hundred by shipwreck, because he had just as large a share in the wares lost as they together had in the wares preserved. Hence, as the share of Caius, which represented two hundred, was in excess of the share of each of them which represented one hundred each, in the same proportion after the disaster, the share of Caius, representing one hundred, will be in excess of the share of each representing fifty, just as both before and after the disaster the share of Caius exceeded by a half the share of each of the others. On the other hand, if Caius should throw overboard wares to the value of fifty, but each of the other men shall have kept his own, estimated at one hundred each, Caius shall suffer a loss of ten, but these other two shall contribute double each, namely twenty; so that just as his fifty answered to the one hundred of each of his partners, in like manner his forty may answer to the eighty apiece that each of them retains."

It would certainly have conduced to clearness if this example had set out that the total cargo was made up of 400 parts, and that the loss of Caius's goods, 200 parts, entailed an average contribution of one-half on each of the adventurers' shares. Similarly, in the second case, the total value of the cargo was 250, and the loss of Caius's goods, worth fifty, entailed an average contribution of one-fifth on each of their shares in the total value. F. H.

AWARD. The decision of the arbitrators or of the umpire to whom parties, wishing to avoid recurrence to a legal tribunal, have referred their dispute. A submission to arbitration may be made a rule of court on the application of either party, and if this has been done, the award may be enforced with the court's assistance; otherwise the only means of compelling the party, against whom the award has been given, to satisfy its directions, is to bring an action and to obtain judgment on the basis of the award (see ARBITRATION). E. S.

AZUNI, DOMENICO ALBERTO, born at Sassari (Sardinia) in 1760, died 1827 at Cagliari in Sardinia. A famous commercial lawyer and president of the Court of Appeal of Genoa, he became a member of the French *corps legislatif*, and was appointed by Napoleon I. one of the members of the commission which drew up the *Code de Commerce*. He was the principal author of the *Livre deuxième du Commerce maritime*. Maritime commerce, is also the subject of his principal works which are written in French, or in French and Italian.

Sistema universale dei principii del diritto marittimo dell' Europa; the French edition has the title *Droit maritime de l'Europe;—Essai sur l'histoire géographique, politique et morale de la Sardaigne;—Sull'origine della bussola; Dizionario di giurisprudenza mercantile;—Mémoires pour servir à l'histoire des marins navigateurs de Marseille.* M. P.

BABBAGE, CHARLES, born near Teignmouth 1792, studied at Trinity College, Cambridge, graduating (without honours) 1814. In 1816 he was made fellow of the Royal Society. He was also an active member of the Astronomical Society. Feeling the defects of the Royal Society as then organised, he helped to found the British Association (1831), the statistical section of which (1833) was due to him, as well as the Statistical Society (1834). Between 1822 and 1843 his time and money were almost wholly devoted to the building of his two great calculating engines, one of which (partially complete) is preserved in the South Kensington Museum. In 1828 he was chosen Lucasian professor of mathematics at Cambridge. He wrote not only on mathematical subjects, but on geology, the diving bell, lighthouses, metal-planing, life insurance, infant mortality, taxation, and last (but to economists not least), on machinery and manufactures. His last public efforts were to repress the barrel-organ, an unhappy application of mechanical invention to the fine arts. He gave the world a retrospect of his own career in *Passages from the Life of a Philosopher* (1864). He died in 1871.

Though Babbage himself has done comparatively little for economic theory, he has certainly aided it indirectly, by his full and faithful descriptions of some of the most characteristic phenomena of modern industry. If he is content to take most of his economical doctrines at second hand, he at least holds them intelligently, and states them with a vigour of his own, dwelling chiefly on the aspect which strikes him most. Political economy, he says, proceeds on the assumption of certain principles which are no more than general,- not compelling universal obedience like the principles of mathematical science, but no less than general, being much more frequently obeyed than violated. Such is, *e.g.*, the principle that

men are governed by their imagined interest, and that each individual is the best judge of this for himself. The proper method of economic (as of other) inquiries is "to divide the subject into as many different questions as it will admit of, and then to examine each separately, or in other words, to suppose that each single cause successively varies, whilst all the others remain constant." It is hopeless for those who cannot master the separate questions in their simplicity to make a successful investigation of their united action (*Exposition of 1851*, pp. 1-4). Babbage has a clear view of the distinction between economics and the exact sciences, and, though a mathematician and a contemporary of COURNOT, WHEWELL, and Tozer, he makes no attempt to treat political economy by mathematical methods. He lays down with great clearness the distinction of fine arts from industrial arts, a technical distinction that involves an economical one. He makes it plain that economical inquiries must deal mainly with industrial arts. In the fine arts, "each example is an individual, the production of individual taste, and executed by individual hands," and therefore costly. In the industrial, "each example is but one of a multitude generated according to the same law, by tools or machines, and moved with unerring precision by the application of physical force," and therefore cheap (*Exposition of 1851*, pp. 48, 49). The social and economical effects of cheapness are brought out by Babbage with useful reiteration in support of free trade, and more especially in connection with the invention and application of tools and machinery. In fact, his chief direct contribution to theoretical economics has been his clear analysis of the DIVISION OF LABOUR (*q.v.*), and of the economical function of Machinery in the modern industrial system. In regard to division of labour, the merits of his discussion of the subject are generally admitted. He pointed out that the advantages mentioned by Adam SMITH in the *Wealth of Nations* (bk. i. ch. i.), would not explain the cheapness of manufactured articles, unless, to that author's list we add the following (*Economy of Machinery and Manufactures*, ch. xviii. p. 137). "That the master manufacturer, by dividing the work into different processes, each requiring different degrees of skill and force, can purchase exactly that precise quantity of both which is necessary for each process,—whereas, if the whole work were executed by one workman, that person must possess sufficient skill to perform the most difficult, and sufficient strength to execute the most laborious, of the operations into which the art is divided." In other words, advantage must be taken of the several individual capabilities of the workmen, intellectual and physical, and the work must be so organised that workmen be only called upon to do that which they can do best of all. In the statement of this principle he has, as he allows, been anticipated by GIOJA, the Italian economist (*Nuovo Prospetto delle Scienze Economiche*, vol. i. ch. iv., Milan, 1815); but he was led to it independently by his own observation of the actual working of English and foreign factories. Without this organisation of labour (he says), full advantage cannot be taken of tools and machines, however ingenious. The nature of machinery, as distinguished from mere tools, is thus described: "When each process has been reduced to the use of some simple tool, the union of all these tools, actuated by one moving power, constitutes a machine" (*Economy of Machinery and Manufactures*, p. 136; cp. Marx, *Kapital* I. xiii. 389 note). The examples show that Babbage conceived, as MARX has done after him, that so long as the moving power is simply the human muscles, we have to do, not with a machine, but only with a tool. It is on subjects like these, at once of technical and of economical importance, that Babbage is at his best. In his views on taxation and currency, he accepts substantially the ordinary doctrines of the dominant school of economists. His criticisms of the defects in the exhibition of 1851 remind us in many places of COBDEN'S views (*e.g.* in *England, Ireland, and America*) on the blessings of cheap goods and large advertising. But in his *Economy of Machinery and Manufactures* (1832), Babbage not only showed the range and accuracy of his own personal observation and inquiry, but displayed a better comprehension of the economical bearings of the factory system of production than any previous economical writer. The book is a storehouse of illustrations from actual business; the writer never draws on his imagination for an example when his memory and his note-book will serve him. On the other hand, his book is not like BECKMANN'S *History of Inventions*, a mere collection and narrative of facts, without an interpretation of them by economical principles, nor is it, like Ure's *Philosophy of Manufactures*, a mere eulogy of the factory system of his own day. Though he lays, perhaps, undue stress on the capitalist, and his gains by the economy of materials and labour, he sees the need of improved industrial arrangements for the workmen, co-operative stores, and industrial profit-sharing, and is in favour of the abolition of the truck system, and all unfair restrictions on workmen's liberty of combination (*Economy of Machinery and Manufactures*, ch. xxi. p. 177, ch. xxviii. p. 253). He is no blind worshipper of Mammon; and he sneers at the vulgar notion that no calling is respectable which does not produce wealth. It is in the public interest rather than their own that he wishes scientific men to have a larger material reward than niggardly governments were then granting (*Exposition of 1851*, p. 147, etc.)

He wrote with feeling on this last subject because he was himself above everything an inventor. This is not the place to discuss the merits of his calculating engines, or the justice of his complaints against the successive governments with which he contended in his twenty years' endeavour to build his engines (see Appendix to *Exposition of 1851*). But we may note that his design in the invention of them was simply to convert into physical mechanism what had already become a mechanical process psychologically (*Mach. and Manuf.*, ch. xix. p. 157), and this is one of the brightest aspects of the work of a modern inventor. In the abstract, Babbage was far from magnifying an inventor's office. "The man who aspires to fortune or fame by new discoveries must," he says (*Mach. and Manuf.*, ch. xxv. p. 212), "be content to examine with care the knowledge of his contemporaries, or to exhaust his efforts in inventing again what he will most probably find has been better executed before; the power of making new mechanical combinations is a possession common to a multitude of minds, and by no means requires talents of a high order." It results, he believes, from the principle of the division of labour, which should be applied not only to industrial, but to mental labour, and has a great career still before it in the latter field. Under happier auspices, Babbage would no doubt have led the way in person still further than he did, in the directions thus indicated.

Those of his works which are directly and indirectly of most economical importance are the following:—*On the Economy of Machinery and Manufactures*, 1832, third edition, 1833.—*Thoughts on the Principles of Taxation with reference to a Property Tax and its Exceptions* [exemptions from it], 1848; second edition, 1851; third edition, 1852. An Italian translation of the first edition, with notes, was published in 1851 at Turin.—*Observations on the Decline of Science in England*, 1830 [largely an attack on the Royal Society].—*A Comparative View of the different Institutions for the Assurance of Life*, 1826.—*Essay on the General Principles which regulate the Application of Machinery* (from *Encyclop. Metropolitana*, 1829).—"Letter to T. P. Courtenay on the Proportion of Births of the two sexes amongst Legitimate and Illegitimate Children" (Brewster's *Edinr. Journal of Science*, vol. ii. p. 85, 1829).—"On the Principles of Tools for Turning and Planing Metals" (In Holtzapffel's *Turning and Mechanical Manipulation*, vol. ii. 1846).—*The Exposition of 1851, or Views of the Industry, the Science, and the Government of England*, 1851.—*Statistics of the Clearing House*, reprinted from *Transactions of the Statistical Society*, 1856.—*Passages from the Life of a Philosopher*, 1864. J. B.

BABEUF, François Noël, called *Caius Gracchus*, born at Saint Quentin 1764, died at Vendôme, 24th February 1797. Left to his own resources at the age of sixteen, his youth was stormy, and his whole life wild and irregular. From the commencement of the Revolution he wrote in the journal *Le correspondant Picard*, articles so violent in tone that he was brought to trial. His acquittal, 14th July 1790, did little to calm him. Appointed administrator of the Département of the Somme, he soon had to be dismissed from that office. This was the time at which he took the name of *Caius Gracchus*, posing as a *Tribun du peuple*. He gave the same name to a journal, which he had previously carried on under the sub-title of *Défenseur de la liberté de la presse*. All this took place shortly after the fall of Robespierre from power. This for a time had his approval; but he soon returned to his earlier views and appealed to those violent passions which, as a demagogue, he knew how to rouse. He gathered round him, under the name of the *Secte des Egaux*, all the old Montagnards who were dissatisfied with the régime of the Thermidorians. The object of this sect, which drew its inspiration from some of the sentimental ideas of J. J. Rousseau, was to destroy inequality of condition, with the object of attaining the general good. Sylvain Maréchal, author of a *Dictionnaire des Athées*, Buonarroti, who claimed to be descended from Michael Angelo, with Amand and Antonelle, who did not, it is true, remain associated long, and some others, formed the staff which recognised Babeuf as their chief. Working with feverish activity, they gathered round them a considerable number of adherents. The place where their club met was the Pantheon. At first orderly, their meetings became tumultuous and threatening and were prolonged far into the night. Attending armed, they prepared to resist by force the dissolution of the club which the authorities had determined on. General Bonaparte, acting with much tact, contrived to close the meetings of the club, but the members formed themselves forthwith into a secret society, and gradually, by winning over soldiers and police, became a formidable body, numbering nearly 17,000 able-bodied and armed men, without including the Faubourgs Saint-Antoine and Saint-Marceau, which were at their back. Addressing themselves to the masses, they published a manifesto written by Sylvain Maréchal in his most inflammatory style—"We desire," said they, "real equality or death. This is what we want. And we will have real equality, no matter what it costs. Woe to those who come between us and our wishes. Woe to him who resists a desire so resolutely insisted on. . . . If it is needful, let all civilisation perish, provided that we obtain real equality. . . . The common good, or the community of goods. No further private property in land; the land belongs to no private person. We claim, we require the enjoyment of the fruits of the land for all; the fruits belong to the whole world," etc.

Instructions in great detail as to the methods of raising insurrectionary movements were added.

"Those who hinder us shall be exterminated; . . . shall all alike be put to death: Those who oppose us or gather forces against us; strangers, of whatever nation they may be, who are found in the streets; all the presidents, secretaries, and officers of the royalist (*sic*) conspiracy of Vendémiaire, who may also dare to show themselves." If the lives of men were to be treated thus, one may guess what fate was reserved for their property. But, after massacres and spoliations, what was to come of it all? The public authorities were to organise employment; there was to be only one source of employment, the state, with subdivisions devised to meet the wants, somewhat rudimentary, of the community. Every one was to have a right to lodging, clothes, washing, warming, and lighting, to food, *médiocre mais frugale*, to medical attendance. This is much what Louis Blanc, who appears to have sought his inspiration among the decrees of the *République des Egaux*, enunciated in more methodical and sober language. "Every one is to work as he is able, and to consume according to his wants."

The secret was well kept; it was only a few hours before the moment fixed for the explosion of the conspiracy (May 1796) that a captain, named Grisel, revealed it to the directory. Decisive steps were taken at once; a vigorous watch was kept, while the public authorities seized the leaders and their papers.

Babeuf and Darthé, condemned to death the 23d of February 1797, stabbed themselves before the tribunal. Life still lingering on, they were guillotined the next day. Buonarroti and Sylvain Maréchal, condemned to exile (*déportation*), died, the first in 1837, the second in 1803.

It may be added that Babeuf seems to have had rather a disordered brain than an absolutely criminal disposition. He died with courage, leaving his wife a written paper declaring his conviction that he had always been a "perfectly virtuous man."

See Blanc, J. J. L.; Brissot de Warville; Communism; Proudhon. A. C. f.

BACK-BOND (Scots law term). A declaration by one apparently an absolute owner that he is only a trustee or mortgagee.

BACKWARDATION. When a seller of stock "for the account" (*v.* Account) on the stock exchange finds that he has not previously obtained the stock which he sold, he asks the dealer to whom he sold to allow him to prolong his bargain until the next settlement. If the security in question be unusually scarce, the buyer finds himself in a position to charge the seller for the accommodation, and the rate or fine which he imposes upon the person unable to deliver his stock or shares, according to the contract, is called a Backwardation. This fine, being paid again and again from settlement to settlement, at varying and sometimes very high rates, is the main source of profit in a Corner (*q.v.*) in stocks and shares. The unlucky seller in blank, being unable either to deliver or borrow stock in satisfaction of the contract, is occasionally at the mercy of the buyer. The stocks of certain railways have, on some occasions, been made so scarce by such operations that speculative sellers have had to pay whatever "backwardation" the successful speculative buyers have been pleased to impose. A. E.

BACON, Francis (Viscount St. Albans). Born 1560-61, died 1626. At the time when Bacon lived, economic questions had not taken any separate place among the studies to which a statesman gave special attention; but Bacon's mind, ingenious, fertile in resource, keen in research as it was, did not neglect the examination of those questions of policy which require economic treatment. James Spedding (Bacon's *Works*, ed. Spedding, vol. iii. p. 515) considers that Bacon was "little before his age in his views with regard to usury, trade, etc." (See Essay xxxiv., "Of Riches"). By the time, however, when the essay on "Plantations" was written, Colonies, as Mr. Reynolds observes, had been successfully founded. Bacon's remark, "Let there be freedom from custom till the plantation be of strength, and not only freedom from custom, but freedom to carry their commodities where they may make their best of them, except there be some special cause of caution," and those on the treatment and government of colonies generally, show perhaps his best judgments on these matters. Most of Bacon's writings deal with other subjects, but the reference to colonial possessions in his speech when lord chancellor on the election of Serjeant Richardson as Speaker (1620), describing this country's portion "in the New World, by the plantation of Virginia and the Summer Islands. . . . Sometimes a grain of mustard seed proves a great tree, who can tell?" (Bacon's *Works*, ed. Spedding, vol. xiv. p. 175), may also be quoted in this connection. The essay "Of the true greatness of Kingdoms and Estates," and the history of Henry VII., though these deal principally with politics, show that Bacon had taken the study of these branches of economics also "among his portion."

The editions of Bacon's *Works* are many. That edited by Spedding, Ellis, etc. (14 vols., London, 1857-74), and those of the *Essays* (London, 1881) and the *Advancement of Learning* by W. Aldis Wright, and of the *Essays* by S. H. Reynolds (both these Clarendon Press), may be specially mentioned. Mr. Reynolds remarks, and truly, that in Bacon's "views about trade he takes the mercantile theory as his guide."

BADGER. This name was formerly used to signify a small trader buying corn or victuals (fish, butter, or cheese, specially mentioned) in one place in order to sell them in another. The Act 5 & 6 Edw. VI. c. 14, § 7 exempts these men from the penalties enacted against Fore-

STALLERS AND REGRATORS (*q.v.*), but requires them to be licensed by three justices of the peace of the county where they dwell. A subsequent act, 5 Eliz. c. 12, declares that the result of this legislation was that many persons "seeking only to live easily and to leave their honest labour" have taken up this trade, and enacts that licensees are to be householders having dwelt in the county for three years, and that the justices may require a badger to enter into recognisances not to forestall or engross. The rules as to licensing are made more stringent, and penalties assigned for a breach of them. The word is now obsolete except in certain dialects. It was used to denote the foreman of a GANG of agricultural labourers (Kebbel's *Agricultural Labourer*, 1870, p. 3).

[Tomlins' *Law Dictionary*, 1835.—Dr. Murray's *New English Dictionary*, *s.v.* 1884.] C. G. C.

BAGEHOT, WALTER. Born at Langport, Somersetshire, 1826, died at Langport, 1877. Bagehot was son of the managing partner of Stuckey's Bank who sent him to be educated at University College, London. After taking successively his B.A. and M.A. degrees at London University, with the highest honours, in 1846 and 1848, he read law, and was called to the Bar; but, after a visit to Paris, where he was living at the time of the *coup d'état*, in 1851, he decided to enter his father's bank. His stay in Paris gave occasion to a series of very brilliant letters on the political condition of France under the prince president (as Louis Napoleon was at that time entitled), which were published in the *Inquirer* newspaper. They were in effect an apology for the *coup d'état*. After Bagehot's death they were republished in an appendix to the *Studies on Literature*. These letters gave the first evidence of the rise of a new critic of high genius, a critic who will take his place far above Lord Jeffrey, and Lord BROUGHAM, and Sydney Smith—though in mere humour Bagehot, humorous as he was, would hardly compare with the last-mentioned—in relation both to political literature and belles-lettres. Indeed, in belles-lettres Bagehot will take rank with Matthew Arnold as one of the two most lucid as well as most discerning critics of that time. The essays which Bagehot contributed, first to the *Prospective Review* and then to the *National Review*, between 1853 and 1864, were not merely among the most brilliant, but among the most remarkable for wide intellectual survey and a detached literary judgment of any published in England during those years. In style they were remarkable equally for their gaiety, for the delicacy of their apprehensiveness, for the *savoir faire* of a man of the world, and for the impartiality of their personal estimates. It is difficult to say whether he wrote best on a theologian like Bishop Butler, on a sensitive poet like Hartley Coleridge, on a novelist like Sir Walter Scott, or on a great historian and essayist like Macaulay. Bagehot's style was buoyant, bright, and often eloquent, but there was always a certain dash of mockery in his eloquence, and a large infusion of seriousness in his mockery. In 1858 he married the eldest daughter of James WILSON, editor of the *Economist*, and two years afterwards succeeded his father-in-law in the editorship of that paper, retaining the post till his death in 1877. He was universally regarded as one of the best financiers of his day, and was consulted by successive chancellors of the exchequer on all critical occasions.

The special service which Bagehot sought to render to economics may be roughly described as the reconciliation of it with history. He was not himself able to perfect this work; but he has stated the needs of the case clearly, and has pointed the way to a solution of its difficulties. "The great want of our present political economy" (he says in the preface to *Universal Money*, 1869) "is that some one should do for it what Sir Henry Maine has done so well for ancient law. We want some one to connect our theoretical account of the origin of things with the real origin." Simple definitions come first in the text-books; but, as in physics, the actual commencements in history and experience have been much harder and odder. Banks, for example, are now part of a refined mechanism of credit, but they were first invented to supply a verified and trustworthy money for traders (*Universal Money*, p. xv. *seq.*)

No economical writer shows clearer consciousness of the enormous difference between the present conditions of European commerce and the conditions of life and industry among our rude forefathers; or, at the present day, among barbarous nations. He had always the twofold object before him—to perfect the abstract theory of political economy as applicable to the former, and to bring home to himself and his readers the existence of the latter. An abstract DEDUCTIVE METHOD seemed to him indispensable from the very complexity of the subject; but it was to be applied only to the study of the peculiarly modern "large commerce," which he loved to contrast with the simple industry of primitive men. Epigram, however, even more than antithesis, was his strength, if sometimes his snare. He was never at a loss for words, and he had a "gay wisdom," absent from economical writing since Perronet THOMPSON. He can hardly be taken quite seriously when he complains that MONTESQUIEU, HUME, and Adam SMITH would have written more profoundly if the public for whom they wrote had not been so intolerant of dulness (*Econ. Stud.* p. 131).

Political economy, as he understands it, is not "a questionable thing of unlimited extent

but a most certain and useful thing of limited extent" (*Econ. Stud.* p. 21). It is "a convenient series of deductions from assumed axioms which are never quite true, which in many times and in many countries would be utterly untrue, but which are sufficiently near to the principal conditions of the modern world to make it useful to consider them by themselves" (*Econ. Stud.* p. 157). Bagehot considers himself the last man of the ante-Mill period (*ibid.* p. 215); he thinks that J. S. MILL "widened the old political economy either too much or not enough" (pp. 19, 20). If he meant to carry on what Adam Smith and RICARDO had begun, and to give a theory of modern large commerce only, he has given us too much; if he meant to give a theory applying to all societies, "advanced" or not, he has given us too little. Bagehot had almost unbounded admiration for Ricardo, with whom, as at once business man and abstract thinker, he had many points of affinity. "The true founder of abstract political economy is Ricardo" (p. 151). Adam Smith discovered the country but Ricardo made the first map (p. 18). Ricardo, it is true, dealt in abstractions without knowing them to be abstractions, and fancied them the real things (p. 157). But it is by the method of Ricardo that Bagehot would build up the science. Two rival methods he mentions only to reject. The first is the "All Case Method," recommended by some theorists of the historical school, who tell us that before we begin to reason we must have "a complete experience." We might as well (says Bagehot) demand a complete record of human conversation as demand a complete record of commercial facts (*Econ. Stud.* pp. 11-14). The second rival method is the "Single Case Method," the advocates of which recommend that each group of facts, *e.g.* a commercial panic, be analysed separately on the merits, without any preliminary theory. But you might as well (says Bagehot) attempt to explain the bursting of a boiler without knowing the theory of steam. On the other hand the mathematical method (*ibid.* p. 15) of Professor JEVONS and Professor WALRAS is too abstract for him (pp. 15, 16); he hints that it explains *obscurum per obscurius* (p. 77). He thinks (with the later rather than the earlier economists) that definitions must (very much, it may be added, as in Law) adapt themselves to the subject matter (p. 49).

His own definitions of wealth—(p. 81) and capital (pp. 49, 50) for example are on the whole on the old lines. Incidentally, in dealing with "Adam Smith and our modern political economy," he gives us his idea of what a treatise on political economy should contain. It should (he says) answer four questions—(1) What is the cause which makes one thing exchange for more or less of other things? (2) What are the laws under which that cause acts in producing these things (the laws, namely, of population and capital)? (3) If these things are produced by the co-operation of many people, what settles the share of each of those people in those things or in their proceeds (the laws, namely, of distribution)? (4) If this co-operation costs something, who is to pay that cost, and how is the payment to be levied (the theory of taxation)? (*Econ. Stud.* pp. 99, 100.)

In considering his own answers to these questions we have to make some allowance for the incomplete state of much of his published writings. He had begun in the *Fortnightly Review*, 1876, a series of essays ("The Postulates of Political Economy") which were to have developed into three distinct volumes on political economy (see prefatory note to *Economic Studies*). The first was apparently to include the abstract theory and the complementary comparison with primitive life, the second a criticism of the works of previous economists, and the third a biographical sketch of them. Though he never carried out the whole plan, he has left us specimens of his work in all its three sections. The biographies include "Adam Smith as a Person," which is in his best manner. The criticism of previous economical work is acute; but, in the case where it is most elaborate (DEMAND and SUPPLY, and COST OF PRODUCTION), it results (as he himself says of Adam Smith's reasonings) not in the "establishment of coherent truths," but in "a rough outline of sensible thoughts" (*Econ. Stud.* p. 119). His criticism (p. 138 *seq.*) of the theory of population is hardly consistent with his own general account of economical laws (*e.g.* p. 76). Like his father-in-law he was perhaps stronger in presenting the *axiomata media* than the first principles (*Literary Stud.* pp. 374, 375). He was one of the first economists in England to recognise the importance of the idea of development (which to him meant Darwinism) for social and economic theories; yet in most cases he is more careful to dwell on the contrast between the old and the new than to show how the one passed into the other or how the phenomena of the one shed light on the phenomena of the other. In one case, BARTER, where he has done the last very skilfully, his own results might have suggested to him the possibility of an abstract economical theory, even of exchange, by no means confined, as he has confined it, to the facts of the "great commerce" (*Econ. Stud.* p. 102). His conception of the process of mediating between the two extreme stages of culture, or in other words, passing from the "pre-economic" to the "economic age," is given in outline in his *Physics and Politics*, in which book (as even in the "Letters on the Coup d'État," and the pamphlet on "Parliamentary Reform") he shows the bent of his mind in his preference for economical illustrations, and his special note of the economical aspects of the subject in hand. Towards the

working classes and TRADE UNIONS he was never hostile; but he was not demonstratively sympathetic. His sympathies lay with the capitalist-employers;—the people who "spend their minds on little else than on thinking whether other people will pay their debts" (*Econ. Stud.* p. 45) have seldom found a more brilliant spokesman. The book by which he will always be best known to economical students is undoubtedly *Lombard Street, a History of the Money Market.* No more vivid picture of "what they do in the City,"—no more perfect description of a "Single Case," was ever given; the author is "in the secret," and can vouch for the facts at first hand. The wonderful clearness of Bagehot's power of statement, his exact knowledge of the subject treated on, together with his firm grasp of economic theory have caused this volume to exert an influence which few books on a subject naturally so dry have possessed. The first sentence gives the key-note, "I venture to call this Essay 'Lombard Street,' and not the 'Money Market,' or any such phrase, because I wish to deal, and to show that I mean to deal, with concrete realities." The promise of this opening is abundantly fulfilled. The character of thought in the "City," the ceaseless movement of men and business, the reasons which led to our money market being arranged and worked as it is, the relative position of the Bank of England to the other banks, the results of Government interference with banking, are all treated with the vividness of one who felt every vibration of these varied currents in every fibre of his own life. The reform Bagehot recommended in the government of the Bank of England has not yet been carried out, but a proposal so original as the appointment of a permanent head to an institution which, since its formation, some two centuries since, has always been managed on the principle that the head should never be permanent, could hardly be expected to win acceptance on its first suggestion. Events since Bagehot wrote have shown more distinctly even than in his time the prudence contained in a proposal apparently so revolutionary. "Lombard Street," perhaps more than any other of Bagehot's works, shows how greatly Economic Science gains when those who are "conversant with its abstractions" are in "true contact with" the facts with which it deals. On the advantage the knowledge hence arising gives the economist, Bagehot not only wrote but constantly spoke during his life, with a vigour and an insistence which those who knew him will continually remember, and which those who read him will be able in some measure to appreciate. The papers on the "Depreciation of Silver" and on "A Universal Money" were also on a congenial subject. In the latter he advocated the farthing plan, or the reckoning of 1000 farthings instead of 960 to the English sovereign, thus making the sovereign equal to five dollars and the half penny equal to the cent. This, he thought, would at least provide the Anglo-Saxon races with a common money of account.

In the volume on the *Depreciation of Silver*, Bagehot discusses the position of England, France, India, and the United States, in view of the falling gold price of silver in 1876.

The cause of the fall, in his opinion, was not an actually increased supply of silver but the apprehension of an increased supply, together with the inconstant proceedings of the German and French governments (pp. 51, 52). He lays stress on the fact that Indian prices have not risen in response to the fall (p. 54, etc.) Yet he refuses all remedies but *laissez-faire*; we must simply give silver a free course, and in the end the prices will rise in India, and the previous condition of trade and finance there will be restored (*Depreciation*, pp. 40, 55, etc.) Changes in currency should never be introduced except when trade is in its normal condition (p. 113). In regard to BI-METALLISM he deals far too hastily with the arguments which tell in its favour as an abstract theory; he scouts it both as an abstract theory and as a practical measure (*Depreciation*, pp. 11, 12, 13, 37, 110 *seq.* to 118). So in the papers on "Universal Coinage" he says bluntly: "The French coinage is based on a double standard, which is absurd" (p. 23). "The French is a symmetrical embodiment of imperfect principles; the English, a confused embodiment of the best principles" (p. 27). From his attitude to these and not a few other questions, Bagehot might be fairly set down as one of the last economists of the ante-Jevons period.

Perhaps the most complete of Bagehot's works was the study of *The English Constitution*, which has been used as a text-book both at Oxford and in several of the universities of the United States, and translated into German, French, and Italian. He preferred very much the English constitution, with that complete fusion of the legislative and administrative powers which was effected by the relation of the cabinet to the House of Commons, to the American constitution with its careful separation of legislative and administrative powers, an arrangement which, in his opinion, resulted in making the people indifferent as to their choice of representatives who were so carefully restrained from exerting any dominant influence over the actual executive. Bagehot attached great importance to what he called the ornamental parts of the constitution, namely the throne and the House of Lords. Not that he regarded them as essential elements in the action of the state, but that he thought that without them the people of the United Kingdom would be far more restless, far more unwilling

to submit to political guidance, far more disposed to interfere mischievously in arrangements which they do not really understand. The "ornamental parts" of the constitution contributed, in his opinion, greatly to the safety of the whole, as they disposed the English people to defer to the opinions of the prosperous and wealthy classes, and to be on their guard against violent and needy adventurers. The whole discussion of the theory of the cabinet, as a constituent element in political philosophy, is of the highest value.

["Letters on the Coup d'État of 1851," written to the *Inquirer* (Unitarian organ), 1852, and reprinted in vol. i. of *Literary Studies.*—*Parliamentary Reform* (review of Newmarch on Electoral Statistics) reprinted, with additions, from *National Review* (Chapman and Hall, 1858).—*History of the Unreformed Parliament* (also from *National Review*).—*Estimates of some Englishmen and Scotchmen*, 1858, written for the *Prospective Review* and *National Review* and in great part reprinted in *Literary Studies* and *Biographical Studies.*—Many Articles in the *Economist*, 1860 to 1877.—*Physics and Politics, or Thoughts on the Application of the Principles of Natural Selection and Inheritance to Political Society*, 1872 (Internat. Scient. Series). (In the German translation (1874) this figures as *Ursprung der Nationen*). —*Lombard Street, a Description of the Money Market*, 1773. New Ed. (Smith, Elder & Co.), 1910.—Various Articles in the *Fortnightly Review*, *e.g.* "Postulates of Political Economy," Feb. and May 1876. See *Economic Studies.*—*The English Constitution*, 1867 (enlarged, 2d ed., 1872).—*International Coinage. A Practical Plan for Assimilating the English and American Money as a Step towards a Universal Money* (reprinted from the *Economist*), 1869, 2d ed. 1889.—*On the Depreciation of Silver* (from the *Economist*, 1876), 1877.—*Literary Studies* (with a biography of the author), ed. by R. H. Hutton, 2 vols., 1879.—*Economic Studies*, 1880.—*Biographical Studies*, 1881. New Editions (Longmans) 1905-7. See also *Political Economy in England*, by L. L. Price, London, 1891, ch. vi., on Walter Bagehot's position as an economist.]

BAILEE. A person to whom the goods of another are entrusted, either for custody or for other purposes. The most conspicuous class of bailees consists of the so-called common carriers of goods, viz. railway companies, steamship owners, and others whose business it is to carry goods from one place to another. They are subjected to a particularly stringent liability for the safety of the goods, but as a general rule bailees are liable for those losses only which occur in consequence of their negligence. A bailee who takes goods into his custody without being rewarded for doing so is called a gratuitous bailee.

BAILEY, Samuel, was born in 1791, the son of a Sheffield merchant, was elected a town trustee in 1828, and became known as the "Hallamshire Bentham." Failing to be elected as M.P., he applied himself to local affairs, and left, when he died, 18th January 1870, over £80,000 to Sheffield. Besides some political pieces, he wrote—

A Critical Dissertation on the Nature, Measures, and Causes of Value, London, 1825, 8vo (a remarkable little volume, pointing out the inconsistencies of Ricardo, J. S. Mill, and De Quincey in their theories of value).—*Letter to a Political Economist*, London, 1826, 8vo (reply to a notice of the previous work in the *Westminster Review*).—*Money and its Vicissitudes in Value as they affect National Industry*, London, 1837, 8vo.—*Defence of Joint-Stock Banks and Country Issues*, London, 1840, 8vo. H. R. T.

BAILEY, Samuel, on Value. Bailey's "dissertation" on the theory of value requires separate notice. Known in metaphysics by his attack on Berkeley's theory of vision, Bailey plays a similar part in economics, objecting to subtleties sanctioned by authority. Defining value as nothing positive or intrinsic, but merely the relation in which two objects stand to each other as exchangeable commodities, Bailey controverts through several chapters Ricardo's theory of real value and its corollaries. Bailey refuses to admit the antithesis of real and nominal value (*Critical Dissertation*, ch. ii.), the possibility of comparing the value of commodities at different periods (ch. v.), the Ricardian formula that the value of A in relation to B "depends on the comparative quantities of labour necessary for the production of it and B, and not on the greater or less compensation which is paid for that labour" (*ib.*), the distinction between value and riches (ch. ix.), and any measure of value of the sort desiderated by Malthus (ch. vii. *et passim*). Malthus, severely criticising the *Critical Dissertation* (*Definitions*, ch. viii.), contends that the writer, by his too narrow definition of value as relating to some definite thing, has missed the essential idea of value in relation to things in general. Upon Bailey's principles, "we must on no account say that butter has been rising during the last month." The controversy is now of some practical importance, as it has a bearing upon recent proposals for determining the variation in the value of money (in relation to things in general) by a Tabular Standard or Index Number (*q.v.*) in particular that standard which is based on wages. Of more purely historical interest are other observations, new perhaps when made (1825). Criticising Ricardo, Bailey disentangles different senses of profits (ch. iv.) He classifies valuables much as J. S. Mill (*Pol. Econ.*, bk. iii. ch. ii.); and remarking on the class of commodity which "admits of being increased by industry and competition, but only at a greater cost," observes—"The extraordinary profit out of which rent arises is analogous to the extraordinary remuneration, which an artisan of more than common dexterity obtains beyond the wages given to work-

men of ordinary skill" (ch. xi. p. 197). He complains that the Ricardians "attempt to give the science an air of simplicity which it does not possess." "Why persist in calling quantity of labour the sole determining principal of value" (*ib.* p. 217); instead of "the more accurate proposition that it is the principle cause" (p. 232). "What should we think of an assertion that coats are to each other in value as the quantities of cloth contained in them"—with the addition "that due allowances must be made for the different qualities of the cloth?" (p. 211). De Quincey (*q.v.*) in his *Logic of Political Economy* has replied to Bailey (see Rent). F. Y. E.

BAILY, Francis, was born at Newbury in Berkshire, 28th April 1774, and went on the London Stock Exchange, 1799. He helped to found the Royal Astronomical Society, and retired from business in 1825 in order to devote himself entirely to astronomy. His revision of star catalogues ranks him among the greatest of modern benefactors to that science. He died 30th August 1844. Among other books he wrote—

The Doctrine of Interest and *Annuities*, London, 1808, 4to.—*The Doctrine of Life Annuities and Assurances*, London, 1810, large 8vo; again in 1813, 2 vols. 8vo, with Appendix, new edition, enlarged, by H. Filipowski, Liverpool, 1864, 8vo (the best work on the subject when first published, and still useful; French translation by A. de Courcy, 1836, 8vo).—*Account of the several Life Assurance Companies in London*, 2d ed., London, 1811, 8vo (reprinted from the foregoing).—*Tables for the Purchasing and Renewing of Leases*, London, 1802, 3d ed., 1812, 8vo. H. R. T.

BAINES, Edward, 1774-1848, descended from a family of Yorkshire yeomen, and at first apprenticed to the printing trade, became (1801) editor and proprietor of the *Leeds Mercury*, which became under him the leading Whig paper in Yorkshire. Cobbett (*Manchester Lectures*, 1832), calls him "the great oracle of the North." He was a zealous social reformer. In 1834 he succeeded Macaulay as one of the two members for Leeds, retiring in 1841. He wrote brief histories and gazetteers of the counties of York and Lancaster; his chief work being a standard *History of the County Palatine and Duchy of Lancaster* (Fisher, Son, and Jackson, London, 1836). He was also the author (aided very largely by his son Edward) of a *History of the Wars of the French Revolution* (2 vols. 4to, 1817), which was expanded after the close of the reign, by the addition of two volumes, into a *History of the Reign of George III.* (London, 1823). He visited Owen at New Lanark in 1819 with Oastler and Cawood, and helped to institute at Leeds a home colony on Owen's model. See *Life of Edward Baines*, by his son Edward Baines, London, 1851. J. B.

BAINES, Sir Edward, (1800-1890), second son of the preceding, is best known by his *History of the Cotton Manufacture* (1835), which was originally written for his father's history of Lancashire, but expanded and separately published on the suggestion of M'Culloch (*Edinburgh Review*, No. 117). He wrote in 1826 a letter *To the Unemployed Workmen of Yorkshire and Lancashire on the Present Distress, and on Machinery*, published first in the *Leeds Mercury*, and afterwards, by order of the magistrates, very largely circulated as a tract through the manufacturing districts, and which was held to have had the happy effect of settling the minds of many whose opinions had been wavering. In the year 1843 he published *Three Letters to the Right Hon. Lord John Russell*, entitled "Reasons in favour of Free Trade in Corn, and against a Fixed Duty." In the same year he wrote *Two Letters to Sir Robert Peel on the Social, Educational, and Religious State of the Manufacturing Districts* (1843)—a criticism of the school clauses in Sir James Graham's Factory Educational Bill, from the point of view of a Nonconformist, and as being too unreservedly in the interest of the employers. He succeeds in showing that the charges of depravity and ignorance made against the manufacturing districts of the north were largely exaggerated, and could in any case have been brought with equal justice against the agricultural districts of south England. In 1846 he wrote a series of twelve *Letters to the Right Hon. Lord John Russell* on the subject of the resolutions which resulted in the system of grants under the committee of the privy council on education, bearing on the analogy between "government protection to *industry* and government protection to *mind*,"—sifting the statistical evidences on which the proposals were based, both as to the actual position at home and the comparison with the conditions of the people. The results of various state systems of education on the Continent of Europe and in the United States. These and other letters were collected into a volume and published by a company in London for "cheap circulation" (1847). Again in 1871, as chairman of the educational department of the Social Science Association, at its annual meeting in Leeds, he delivered an address, subsequently published in London, *On the Position and Prospects of National Education.* In 1823 the first mechanics' institution in England was established; and in 1837, on the formation of the Yorkshire Union of Mechanics' Institutes, Baines was elected president, and for more than fifty years, in his annual addresses from the chair, he reviewed the position of scientific and technical education in this country (see Annual Reports of the Yorkshire Union of Mechanics' Institutes). In 1858, as president of the section of economic science and statistics at the annual meeting of the British Association for the Advancement of Science, at Leeds, his address was "On the Woollen Manufacture of

England, with Special Reference to the Leeds Clothing District," and it was published both in the report of the British Association and in the *Journal of the Statistical Society of London*, March 1859. He represented Leeds as a Liberal in the House of Commons from 1859-74, he took a leading part in modifying the proposals for taking the CENSUS for 1861, and notably against a census of religious opinions. He brought in a Borough Franchise Bill in 1861, and on moving the second reading (10th April), he traced the progress of the country, and notably of the working classes since 1831, in education, in providence, in temperance, and in morality; illustrating these, too, by the growth and the improved character of our periodical literature. The speech was said by Mr. Gladstone to have added a new chapter to the social history of the country. It was published in London under the title of *Progress and Reform*, 1831 and 1861.

BAINES, THOMAS, younger brother of Sir E. Baines (1806-1881), wrote on the *History of the Town and Commerce of Liverpool* (1852), On the *Agricultural Resources of Great Britain, Ireland, and the Colonies*, 1847, and on the *Present State of the Affairs of the River Plate*, 1845. J. B.

BAIRN'S PART OF GEAR. See LEGITIM.

BAKOUNIN, MICHAEL (1814-1876), the founder of anarchism, began life as a Russian artillery officer. Stationed in Poland, he conceived a disgust at the repressive measures he saw in force there, resigned his commission, and devoted himself to the study of philosophy at Moscow. He went to Germany about 1846, and became a Hegelian. In 1847 he was at Paris, and made the acquaintance of PROUDHON. Expelled from France, he returned to Germany and took a prominent part in the Dresden insurrection of 1849, for which he was condemned to imprisonment for life. He was handed over to the Russian authorities, and confined in the prison of SS. Peter and Paul at St. Petersburg for eight years. Then, in 1857, he was exiled to Siberia, whence he soon managed to escape to Japan. After passing through America and England he established himself in Switzerland. His subsequent history will be found under ANARCHISM (*q.v.*) He died at Berne 2d July 1876.

[É. de Laveleye, *Le Socialisme Contemporain*, 3me éd. 1885, pp. 227-239.] E. C.

BALANCE OF TRADE. "It often happens," says MILL, referring to the supposed mercantilist views on money, "that the universal belief of one age of mankind" "becomes to a subsequent age so palpable an absurdity that the only difficulty then is to imagine how such a thing can ever have appeared credible." It is generally found, however, on investigation that the "palpable absurdity" formed but a minor part of a system the rest of which is forgotten, but which, as a whole, was, in the historical conditions of the case, not unreasonable. This is true especially of the doctrine or policy of a "favourable balance of trade." From the modern point of view we take it as axiomatic that, apart from other international obligations such as tributes and the like, exports must over a term of years pay for imports. No nation, it is held, can go on receiving from other nations quantities of real wealth, actual consumable commodities, without giving something in return. But the store of precious metals, and even the power of incurring debt, or of paying by previous commutations, would soon be exhausted with a constantly adverse balance, and accordingly produce must pay for produce, taking the term in its most general sense (cp. H. Sidgwick, bk. i.), so as to include services freights, etc. It is further argued that if a nation were to attempt to import more than its normal exports could pay for, there must soon be a drain on its money, and then directly or indirectly, by the QUANTITY THEORY (see MONEY), prices would fall. This fall would stimulate exports and place a check on imports until the balance was again restored. Under a system of approximately perfect competition it follows from the very nature of money that all EXCHANGE is ultimately BARTER, and that the flow of the precious metals from country to country is an effect and not a cause of the direction and extent of its foreign trade. A nation will always obtain under such a system enough of the precious metals to keep its prices at such a level that its exports will just pay for its imports; in other words, that the balance of trade will, if time is allowed for adjustment, be even. Accordingly nothing can seem more absurd, so far as trade is concerned, than for a government to attempt to get a permanent and constant excess of EXPORTS over IMPORTS in order that a balance may be due on the precious metals. For by a converse train of reasoning the effect of such an influx would soon be a rise in prices and a check on exports and a stimulus to imports until the natural rate of exchange was restored. Thus from the modern point of view the policy of attempting to obtain a favourable balance (or excess of exports) in order to obtain money seems not only palpably absurd, but on analysis quite impossible.

Yet in its origin this peculiar importance attached to the PRECIOUS METALS was by no means an absurdity, and the regulations intended to increase the amount of money in the country to a great extent achieved their object. In the Middle Ages we find the germ of the balance of trade system in what was very happily styled by JONES the balance of bargain system (Jones *Political Economy*, edit. by WHEWELL). [Compare MERCANTILE SYSTEM; COMMERCIAL SYSTEM]. According to this primitive method the state, through its officials, attempted on every

bargain to obtain a balance in money (of silver or later on of gold). Thus, with certain material imports a certain amount of money must be brought in; the foreign merchant who came to the country to sell was obliged to "employ" the money he obtained in the purchase of English wares; the organisation of the STAPLE was used to the same end, and, in short, all kinds of devices by way of prohibition and encouragement were adopted so as to obtain a favourable balance in money. There can be little doubt (compare Schanz, *Englische Handels-Politik gegen Ende des Mittelalters*, etc.; Jacob's *History of the Precious Metals*; Jones, *op. cit.*) that this policy was at any rate partially successful, and that the country obtained more money than it otherwise would have done. But not only was this policy, to some extent at least, practicable, but under the historical conditions it appears to have been justifiable. In the Middle Ages CREDIT was almost unknown, and the rudimentary forms which appeared were strangled by the wide-reaching laws and adverse public opinion on interest. As a consequence there was often a real dearth of the precious metals, in a sense that to us is almost unintelligible. At the same time also it must be observed the whole economic progress of the mediæval period was bound up with the commutation of services and payments in kind into money payments (compare T. ROGERS on SCUTAGE in *Six Centuries of English Work and Wages*). Thus any scarcity of money was a real evil involving very real burdens, and it was good policy to obtain a favourable balance because money was a peculiarly important part of the fixed capital of the nation. In process of time the balance of bargain system gave place to the balance of trade, and nations took the place of individuals (see COMMERCIAL SYSTEM). Adam SMITH had no difficulty in showing that before his time this system had become antiquated and useless because the natural course of trade gave a sufficiency of money, and the accumulation of treasure was not desirable (even if possible) for furthering foreign policy. Money, in fact, had already lost its peculiar importance, and it was easy to show at any rate that if a favourable balance was desired, one country must be compared with the rest of the commercial world, and that the best policy was to buy in the cheapest and sell in the dearest markets, independently of the particular balance with individual countries.

Reverting to the modern position, it must be noticed that exports and imports form only a part (though with this country the most considerable part) of the international indebtedness (for a complete enumeration of items see Goschen's *Foreign Exchanges*, ch. iv.) There must also be taken into account "invisible" exports, such as freights, commissions, loans, expenses of government or individuals abroad, tributes, interest, etc. It must be noted also that so far as the influx or efflux of the precious metals is concerned, it is not the permanent indebtedness but the need of payment at a particular time which is of importance. Thus the balance of indebtedness may for the time being be in favour of a country that is hopelessly insolvent (compare COMMERCE).

In conclusion it may be observed that even under modern conditions sometimes it is of real importance to the nation as a whole to have a favourable balance, or at least to be able to brave an unfavourable one, in other words, to check a drain of gold. In normal conditions the existence of a favourable balance (or a state of indebtedness in which money is due to the country) would simply mean that importers of foreign goods can obtain exporters' bills at a cheaper rate than usual owing to their relative abundance, so that favourable is construed relatively to importers, the same state of things being adverse to exporters, and practically indifferent to the nation at large. But at certain times a foreign drain becomes sufficiently serious to threaten the stability of the banking system of the country, and in technical language the "exchanges must be corrected." This can only be done, as a rule, either by effectively raising the rate of discount or by affecting the trade balance through checking imports and increasing exports (see EXCHANGES, FOREIGN; DRAIN OF BULLION). Apart from this occasional effect of an adverse balance from the banking point of view, the principal point to observe is the rightful interpretation of the causes of a certain purely trade balance. Thus for many years the imports into England of commodities have exceeded the exports, whilst with India the converse is the case. The explanation is to be found in the other elements of international indebtedness. It is a great error to argue at once that because there is an excess of imports the nation is practically living on its capital, for the other items in the account, especially interest on foreign investments and payments of freights, must be considered (see Sir R. Giffen, essay on "The Use of Import and Export Statistics" in *Essays on Finance*).

[For the historical treatment of the question compare Schanz, *op. cit.*, and Adam Smith's *Wealth of Nations*, bk. iv.—List, *National System of Political Economy*. The theory is given in all the text-books, but special attention may be called to Prof. Bastable's *International Trade*.]

J. S. N.

BALANCE OF TRADE (HISTORY OF THE THEORY).—The views of the earliest popular economists of England on the best manner of enriching the nation agree with the measures taken by the legislature and with the balance-of-bargain system, as enforced by the statutes of employment. "The holl welthe of the reame is for all our riche commodites to gete

owt of all other reamys therfore redy money; and after the money is brought in to the holl reame, so shall all peple in the reame be made riche therwith." (Clement Armstrong, *A treatise concerninge the Staple and the Commodities of this Realme*, 1530, ed. Pauli, pp. 32, 61).

But when the English merchants had broken down the power of foreign COMPANIES and had formed companies of their own, they sought after a rule by which to ascertain what advantages the regulation of commerce afforded to the nation taken as a whole. Even during the prevalence of the balance-of-bargain system, a rough rule for the policy on which the coinage should be based had been given by an officer of the mint, Richard Aylesbury, who thought that "provided the merchandise exported from England was properly regulated, that is, if no more of foreign commodities were allowed to be imported than the value of the native commodities which should be taken out, the money in England would remain, and great plenty would come from beyond the seas." *Rolls of Parliament*, vol. iii. p. 126; in Ruding, *Annals of the Coinage*, vol. i. p. 241. These views, put forward in 1381 by Richard Aylesbury, contrary to the then prevalent opinion (Cunningham, *Growth of English Industry and Commerce, Early and Middle Ages*, 1890, p. 354), were formulated anew and with success by the anonymous author of "A Discourse of the City of London." He shows that the increase of prices, which followed the influx of the precious metals from the West Indies had induced the gentry to "play the fermours, grasiars, brewers, or such like." This mercantile spirit must be guided by the experience of the merchant's daily practice. England being in need of foreign commodities, and having no mines of its own, "it followeth necessarily, that if we follow the councel of that good old Husband Marcus Cato, saying, 'oportet patrem familias vendacem esse, non emacem' and do carrie more commodities in value over the seas, then wee bring hether from thence: that then the Realme shall receive that Overplus in Money" (*A Discourse of the Names and First Causes of the Institution of Cities, and peopled Towns; and of the Commodities that do grow by the same; and namely of the City of London*, etc. (about 1578), in Stow's *Survey of London*, 1598, p. 450). William STAFFORD accepted these principles, adding, that the imported commodities should be "most apte to be either carried for or kepte in store," and he praised the bailiff of Carmarthen, who had forbidden a ship freighted with oranges to sell them (*A Compendious and Brief Examination*, ed. 1581. New Shakspere Soc. Ed., pp. 50, 54, 57). This rule of commercial politics has been accepted by John WHEELER (*A Treatise of Commerce*, 1601, pp. 7, 8) and by Gerrard de MALYNES, who seems to have suggested the name of balance, saying that the prince should not suffer "an overbalancing of forreine commodities with his home commodities, or in buying more then he selleth." *A Treatise of the Canker of England's Commonwealth*, 1601, p. 2. The underbalance of trade and the consequent scarcity of money he ascribed to the "undervaluation of our Money in Exchange," effected by the practices of the bankers. His erroneous ideas and those of Thomas MILLES concerning "merchandising exchange" (*The Customer's Replie*, 1604) were attacked by Edward MISSELDEN, who hoped to remedy this undervaluation of the coin by "raising" it (*Free Trade or the meanes to make Trade florish*, 1622, pp. 103-105), similar views being expressed in the parliament (*Parl. Hist.* i. 1195); he calls, however, the balance of trade "an excellent and politique invention, to shew us the difference of waight in the commerce of one kingdome with another in the scale of commerce" (*The Circle of Commerce, or the Balance of Trade, in defence of Free Trade*, by E. M., 1623, pp. 116, 117). He considers poverty and prodigality as the causes of the present underbalance, the Dutch at once growing rich by manufactures and restraining the home consumption (pp. 132-135). These opinions were generally accepted even by Fras. BACON (*Letter of Advice to George Villiers*, 1616; *Letters and Life*, ed. Spedding, vol. vi. pp. 22-49, and *History of Henry VII.* Works, vol. vi. p. 223), and King James I. (*Parl. Hist.* vol. i. p. 1179). As stress was laid upon the profit of exportation of manufactures, the uselessness of the prohibitions of the exportation of money and bullion became more and more evident. Commercial states like Tuscany and Holland, allowing its free exportation, grew rich, while those forbidding it, like Spain, became impoverished. This point was clearly elucidated by Lewes ROBERTS, *The Treasure of Traffike*, 1641, p. 77, and the whole doctrine, including the views on exchange as a symptom, not as an agent of trade, as Malynes had maintained, was most systematically explained by Thomas MUN in his posthumous treatise *England's Treasure by Forraigne Trade; or the Balance of our Forraigne Trade is the Rule of our Treasure*, 1664, who in his *Discourse of Trade* (new ed. 1621) had still advocated the statutes of employment. To him therefore the honour of its invention has often been ascribed. The obstacles to trade were for the most part caused by fiscal motives, and the Commonwealth sought to stimulate the exportation of English commodities by the Act of Navigation. The balance of trade was thought to be advantageous: by fetching the commodities from the immediate places of their production and by sending them to their best market, where they yield the greatest price, but above all by the cheapness of the exported manufactures and the reduction

of the price of labour (*The Advocate: or a Narrative of the State and Condition of Things between the English and Dutch Nation*, ed. 1651.) This programme was supported by the greatest economists of the end of the 17th century like PETTY, TEMPLE, LOCKE, having all the tendency to overwhelm the Dutch power, Another body of practical men inquired into the advantage of some special trades, among which the French and East India trade was found ruinous, as absorbing money and bullion, and giving in its stead but wines or spices. To these at a later date acceded the fear of Irish competition in the matter of wool. This pessimistic series of writers begins with S. FORTREY'S *England's Interest and Improvement*, 1663 ; the author of *Britannia Languens*, 1680, and J. POLLEXFEN, *England and East India Inconsistent in Their Manufactures*, 1697, were its foremost champions. The commercial treaty with France in 1713 was a new matter of complaint. In the *British Merchant*, all the arguments against the underbalance are restated by Sir Theodore JANSSEN in his *General Maxims in Trade*, 1713, and by Joshua GEE, who afterwards put forward his views in *The Trade and Navigation of Great Britain consider'd*, 1729. "His writings," says HUME, "struck the nation with an universal panic, when they saw it plainly demonstrated that the balance was against them for so considerable a sum as must leave them without a single shilling in five or six years." Nevertheless, the creed of the balance of trade was shared not only by CANTILLON and Sir J. STEUART, bk. ii. ch. xv., but even by free-traders like Thomas Gordon, *The Nature and Weight of the Taxes of the Nation*, 1722, VANDERLINT, *Money answers All Things*, 1734, and the author of *An Essay on the Causes of the Decline of Foreign Trade*, 1743.

For some time, however, the belief in the doctrine had been shaken, partly by traders whose interest it was to refute its postulates, partly by the impossibility of giving the exact statistical statement of the balance, partly by the doubts raised by superior thinkers. One of the first, it seems, was the author of *Free Ports, the Nature and Necessitie of them Stated*, B. W., 1652. "All consultations whatsoever about trade, if free ports bee not opened and this wholesale or general trade bee not incouraged, do still but terminate in som advice or other about regulating our consumption ; and have no other good at farthest, but preventional, that our Ballance of Import exceed not our Export: which to confine ourselves to alone, is, on the other side a cours to short, as it will neither serv to rais the Strength of this Nation in shipping, or to Govern the Exchange abroad" (p. 8). But the first thorough refutation was given by Nicholas Barbon in 1690 and 1696 (see BARBON), and his influence is to be traced in the writings of Sir Dudley NORTH (*Discourses of Trade*, ed. 1691), who calls, evidently in reference to it, the balance of trade one of the current "politick conceits in trade ; most of which Time and better Judgment hath disbanded." The increase of manufactures had in opposition to the former opinion that "trade was the source of national riches" made way to the doctrine that the employment of population and labour was the primitive enriching power. "Land and labour," says therefore John BELLERS, "are the foundations of riches, and the fewer Idle Hands we have the faster we increase in value ; and spending less than we raise is a much greater certainty of growing Rich than any computations that can be made from our Exportation and Importation" (*Essays about the Poor*, 1699, p. 12). These views, though far more mingled with mercantilist beliefs, were upheld by the author of *The Advantages of the East India Trade to England consider'd* (1701 and 1720), who pointed out, that the only rule of foreign trade should be "to get a greater for a less value," and by DE FOE, who while refuting the authors of the *British Merchant*, declared himself to be "a profess'd opposer of all fortuitous calculations, making estimates by guess work of the Quantities and Value of any Trade or Exportation" (*A Plan of the English Commerce*, 1728 (2nd ed. 1737, p. 232). This confession and the doubts raised by Bishop BERKELEY in his *Querist* (1735), Queries 555, 556, whether the rule of the balance of trade held always true, and whether it admitted not of exceptions, were indeed nothing new. For even DAVENANT, originally much devoted to these estimates (*Of the use of Political Arithmetic*, 1698, Works, vol. i. pp. 146-148), declared himself afterwards convinced that they were inaccurate for many important trades (*A Report to the Commissioners*, 1712, Works, vol. v. p. 382). Sir Josiah CHILD also stated, as Berkeley did, that by means of smuggling, and furthermore in the case of countries whose income was consumed by absentees, like Ireland, exports could exceed imports without enriching the people (*A new Discourse of Trade*, 1690, ch. ix.) The doubts which all these expressions of opinion fostered, paved the way for the overthrow of the system. This was accelerated by the flourishing state of English trade, which continued to prosper through the 18th century notwithstanding all the predictions of evil expressed by the balance-of-trade theorists.

The successful onslaught on the system made by Hume in his *Essays* (1752) is now a matter of history. In these he restated Barbon's assertion that an equivalent must be paid in an export for every import received. Hume's refutation of the balance-of-trade theory had a considerable influence on the free trade doctrines of the PHYSIOCRATS and also upon Adam Smith. The latter, like Barbon, controverted the theory on this subject which was laid down by Mun

and by Locke. Adam Smith also, in the preference he gave to the home trade, and in his opposition to the mercantilist views, shows an inclination to incredulity in relation to the theory of foreign trade. The manner in which Adam Smith thus placed himself in opposition to the commonly-accepted opinions of his time explains the fact that his criticism of the theory of foreign trade obtained, when it first appeared, comparatively few adherents. Even PITT, while proving the success of his policy by the growth of exports, said, when the authority of Adam Smith was quoted against him, that he considered "that great author, though always ingenious, sometimes injudicious" (*Parl. Hist.* xxxiii. 562-3). The questioning, however, as to the complete applicability of the theory gradually extended as the 18th century waned. After the successful peace of Paris in 1763 the fear of a drain of specie began to spread in consequence of the growth of indebtedness to foreigners; and though the balance of trade seemed favourable, new doubts were expressed whether the values stated of the goods exported were accurate (*The Present State of the Nation*, 1769; by W. Knox, secretary to George Grenville, pp. 65-67). The observations of Burke on this occasion, though professedly designed to prove the balance to be favourable, are very acute. Though not allowing the statement as to the certificated goods for re-exportation to admit of error, he concedes the possibility for free goods, exported without drawback and bounty; he remembers that the costs of freight and the profits of the merchant are not taken into account, that in the balance of the Irish and West India trades import and export both refer to one nation, and he ridicules those who held that the foreign imports were a loss without even considering that part of it which enters into production. (*Observations on a late State of the Nation*, 1769, pp. 34-38. Also his *Letters on a Regicide Peace*, 1796, Works, vol. iv. p. 554). The refutation of the original theory of the balance of trade is justly ascribed to Adam Smith, and his predecessors in England, of whose principal works some notice has been given here. The work of Adam Smith was completed by Ricardo in his theory of international trade (see INTERNATIONAL TRADE; BURKE; ADAM SMITH; RICARDO) which has hitherto been the special domain of English economics.

[See Buckle's *History of Civilisation in England*, vol. i. pp. 210-212.—J. Janschull, *English Free Trade* (Russian) 1 part, Moscow 1876.—E. von Heyking, *Zur Geschichte der Handelsbilanztheorie*, Berlin, 1882.—W. Cunningham, *The Growth of English Industry and Commerce*, 1885, p. 362.—C. F. Bastable, *The Theory of International Trade*, Dublin, 1887, p. 164.—G. Schanz, *Englische Handelspolitik*, 1881.] S. B.

BALANCE-SHEET. The simplest form of balance-sheet which a trader can require is the following:—

BALANCE-SHEET of . 19

Assets.		*Liabilities.*	
Debtors on open account .	£4500	Creditors on open account . .	£2750
Stock in Trade .	8250	Acceptances . .	1250
Balance at Bankers	1250	Other Liabilities .	7000
Other Property .	6000	Surplus or Capital	9000
	£20,000		£20,000

How much may depend, not only on the amount, but on the character of the various "assets" and "liabilities," is explained with great clearness in the *Country Banker* by Mr. George Rae, *Letter III.* on the "Testimony of a Balance-Sheet." Mr. Rae remarks on this: "A man's duly-certified balance-sheet is the one reliable voucher of his actual position; all other information that we can gain respecting him must be more or less at second hand and imperfect, and it may be delusive. But there is no mistaking the figures of an honest balance-sheet."

Mr. Rae writes especially from a banker's point of view, as a man in the habit of advancing money, sometimes in large sums, to traders, but the knowledge of what a man's own business position may be is often obscured even to himself by careless and slovenly book-keeping, and the habit of preparing an "honest" balance-sheet is essential to soundness of trade.

BALANCE-SHEET. (2nd statement.) A balance-sheet is a statement exhibiting the assets and liabilities of a concern, the capital invested in it, and the balance of profit and loss, or of income and expenditure, accrued to date of the account. If books of account are kept on a proper Double Entry System the debit and credit balances of the ledger will form respectively the credit (right hand) and debit (left hand) sides of the balance-sheet, and will agree in total. The capital of the concern will appear on the left-hand side, representing, subject to any balance of profit or loss, the excess of assets over liabilities. If the liabilities exceed the assets a balance of loss, which will more than absorb any capital, will appear on the right-hand side.

The term balance-sheet is sometimes erroneously applied to what are really statements of receipts and payments, as in the case of the accounts of charitable institutions; these last naturally and usefully take the form of a statement of income and expenditure for a period. No account covering a period of time, and not exhibiting the position of matters at a particular date, can properly be termed a balance-sheet.

A form of balance-sheet appended to the First Schedule of the Joint Stock Companies' Act of 1862 is a suitable one for such companies as have not special provisions with regard to the form of their accounts laid down in their articles of association. This form of account is as follows:—

Dr. BALANCE-SHEET of the Co. made up to 19 . **Cr.**

Capital and Liabilities.			£ s. d.	£ s. d.	Property and Assets.			£ s. d.	£ s. d.
I. CAPITAL.		*Showing:*			III. PROPERTY held by the Company.		*Showing:*		
	1.	*The Number of shares*				7.	*Immovable Property, distinguishing—*		
	2.	*The Amount paid per Share* . . .					*(a) Freehold Land*		
	3.	*If any Arrears of Calls, the Nature of the Arrear, and the Names of the Defaulters* . . .					*(b) „ Buildings* . . .		
							(c) Leasehold „		
	4.	*The Particulars of any forfeited Shares*				8.	*Movable Property, distinguishing—*		
							(d) Stock in Trade		
II. DEBTS AND LIABILITIES of the Company.		*Showing:*					*(e) Plant* . .		
	5.	*The Amount of Loans on Mortgages or Debenture Bonds* . .					*The Cost to be stated with Deductions for Deterioration in Value as charged to the Reserve Fund or Profit and Loss*		
	6.	*The Amount of Debts owing by the Company, distinguishing—*			IV. DEBTS owing to the Company.		*Showing:*		
		(a) Debts for which Acceptances have been given				9.	*Debts considered good for which the Company hold Bills or other Securities* .		
		(b) Debts to Tradesmen for supplies of Stock in Trade or other Articles . .				10.	*Debts considered good for which the Company hold no Security*		
		(c) Debts for Law Expenses .				11.	*Debts considered doubtful and bad* .		
		(d) Debts for Interest on Debentures or other Loans . .					*Any Debt due from a Director or other Officer of the Company to be separately stated* . .		
		(e) Unclaimed Dividends . .			V. CASH AND INVESTMENTS.		*Showing:*		
		(f) Debts not enumerated above				12.	*The Nature of Investment and Rate of Interest* . . .		
VI. RESERVE FUND.		*Showing:* *The Amount set aside from Profits to meet Contingencies* . .				13.	*The Amount of Cash, where lodged, and if bearing Interest* .		
VII. PROFIT AND LOSS.		*Showing:* *The disposable Balance for Payment of Dividend, &c.* .							
CONTINGENT LIABILITIES.		*Claims against the Company not acknowledged as Debts* . *Monies for which the Company is contingently liable* . .							

E. W.

BALBI, ADRIANO (an Italian Economist of the first half of the 19th century). Author of *Saggio di una statistica d'Italia*, published at Vienna in 1833. He was also the author of the following works :—

Bilancia politica del globo o quadro geografico-statistico della terra, Padova, *Zambeivari, coi tipi della Minerva* 1833.—*L'impero russo paragonato alle principali nazioni del mondo* (in French), Paris, 1829.—*La monarchia francese confrontata coi principali Stati del mondo* (in French), Paris, 1828.—*Quadro politico-statistico dell Europa, nel* 1820 (in French), Lisbon, 1820.—*Saggio statistico*

sul Regno di Portogallo, paragonato agli altri Stati di Europa (in French), Paris, 1822, 2 vols. in 8vo.—*Ragionamenti di statistica e geografia patria*, Milano, Civelli, 1845, in 8vo.—*Scritti geografici, statistici e vari, pubblicati da diversi giornali d' Italia, di Francia e di Germania, raccolti e ordinati per la prima volta*, Torino, 1841-42, 5 vols. in 8vo. M. P.

BALDWIN, Loammi, born in Massachusetts 1780; an eminent civil engineer; died 1838. In his *Thoughts on the study of political economy as connected with the population, industry, and paper currency of the United States* (Cambridge, Mass., 1809, pp. 75) Baldwin advocated, as a remedy for the evils of the irregular currency of the time, that the state banks be consolidated, and that the capital of the United States Bank be extended. He favoured internal improvements in his country, and displayed more than ordinary appreciation of the use of statistics; he also advised that the United States census of 1810 should include a record of births, deaths, and marriages. D. R. D.

BALSAMO, Paolo, born at Termini (Sicily) in 1763, died at Palermo in 1816. He was a priest who travelled for several years in Italy, France, and England. In England he became a friend of Arthur Young, from whom he learnt a great deal. Arthur Young published some of the writings of Balsamo in his *Annals of Agriculture*; Broussonnet translated some into French and enriched others with commentaries. When Balsamo returned from England he became professor of political economy in the university of Palermo, and his teaching is clearly based upon Young's doctrines; he divides his course into political, theoretical, and practical agriculture, considers agriculture as pre-eminent, opposes state regulation of prices and every other form of state interference with production and commerce, and declares state help for the poor a calamity. His lectures exerted a great and salutary influence on his countrymen, although it was some time before he triumphed over their prejudices. His lectures were not only technical, viz. concerning methods of agriculture, but also political, as he insisted strongly on the necessity of giving the proprietor of the soil absolute certainty of possession and personal security, and of putting down brigandage and robbery. As to the technical part of his lectures, Balsamo recast it in conformity with the new doctrines of chemistry which were being discovered in his days. Having received an abbey from the viceroy Caramanico, he entered parliament as one of the clergy, and succeeded in passing a plan of radical reform in the system of taxation. The basis of revenue consisted of rents from properties of the crown, and of an intricate list of taxes called donations, which parliament had granted, and which weighed very differently on the different classes, and had each a separate machinery for collection. Balsamo succeeded in substituting for all these taxes a proportional income-tax. He was rewarded by the government with a very rich abbey. A part of his writings is perhaps lost; a part was published in 1802 at Palermo, under the title *Memorie economiche ed agrarie riguardanti il regno di Sicilia*; another part was published after his death in a review called *Effemeridi scientifiche e letterarie per la Sicilia*, Nos. 8, 10, 11, 18, 24, 32. In 1804 he published a pamphlet on diseases of sheep, and in 1816 his *Principii di Agricoltura e di vegetazione per gli agricoltori di Sicilia*. Noteworthy is also his journal of a voyage through Sicily, published 1809, full of statistical information. In 1845 two volumes of economical writings were published at Palermo (tipogr. Muratori), under the title, *Memorie inedite di publica economia ed agricoltura*. M. P.

BAMFORD, Samuel (1788-1872), son of a weaver at Middleton, Lancashire, after being a warehouseman in Manchester, and then a sailor in the coasting trade, finally settled down as a weaver at Middleton. His book, *Passages in the Life of a Radical*, 2 vols. 1841, is a valuable authority for the history of the condition of the working classes, and their political movements in the years succeeding Waterloo. He was all his life a strong radical reformer; and was more than once imprisoned for his part in political movements; but his maxim was always "hold fast by the laws," and he braved the loss of popularity by a remonstrance with the Chartists (*To the Hand-loom Weavers of Lancashire, and the persons styled Chartists*, 1839). His poems, especially those in Lancashire dialect, had a wide circulation. J. B.

BAN. Roumanian coin equal to 1 centime (100 bans = 1 lëu). F. E. A.

BANALITÉS. The name given to the exclusive right of the lord in France to erect a mill, bakehouse, or wine press, and to compel his tenants or serfs to make use of them. As he had a monopoly, he could make what charge he pleased. The only provinces exempt from *banalités* were Flanders, Artois, and Hainault. These petty oppressions were a great source of discontent in the agricultural districts of France. This right, with so many others, was abolished in the famous session of the national assembly on 4th August 1789.

[De Tocqueville, *France before the Revolution*, note lxxvii.] R. L.

BANCO. The addition of this word to the name of a coin implies that the coin designated is an imaginary one representing only bullion of a certain weight. Before the introduction of the present German monetary system all large payments in Hamburg were effected by transfers at the principal bank, the unit of which was the *mark-banco*, a coin which did not exist, but which was supposed to be containing silver of a certain weight and fineness, and worth

1s. 6d. The aggregate deposits were held by the BANK OF HAMBURG in bullion or foreign coins. A similar system of transfers was formerly used in Amsterdam, and existed to a certain degree in the practice of the mediæval deposit banks in Italy. It is not used anywhere at present.

BANDINI, SALUSTIO ANTONIO, born 1677, at Siena, brought up as a soldier, preferred retiring into the country and giving himself up to agriculture. In 1705 he took holy orders, and became an archdeacon in 1723. He was president of the Physiocratical Academy, a society intended to promote natural sciences rather than literature.

In 1737 he wrote his famous essay on the Sienese marshes, *Discorso Economico*, offered in manuscript to the grand-duke Francis in 1739; but not printed till 1775 (*Prima edizione di Firenze per Gaetano Cambiagi stampator granducale*), fifteen years after Bandini's death (1760). A second edition was issued by CUSTODI, *Scrittori classici italiani di ec. polit.*, Milano, 1803, *Parte moderna*, Tomo I. Bandini's essay contains the following leading principles of political economy. (1) "Human nature gives its best when it can act unfettered; consequently, the fewer and simpler the laws the better."—(2) As a corollary from the preceding principle, "abolition of all vexatious taxes and reduction of state officials to a minimum."—(3) Abolition of laws regulating prices; "if proprietors and peasants grow rich through high prices of agricultural produce, so much the better for the consumers, because more produce will be produced for them."—(4) "The want of commercial and industrial liberty causes famines."—(5) "Laws against monopolies (natural) and corners are based on prejudices."—(6) Rapidity and facility of exchange, not abundance of money, are the causes of wealth.—(7) A single tax is easier and cheaper for all parties concerned than a great many; it ought to be imposed on land and farmed out.

The Sienese marshes, which Bandini hoped to reclaim by the adoption of these maxims, constitute the lower part of the province of Siena and about two-fifths of the whole of Tuscany. His maxims, neglected by Francis, inspired the policy of the grand-duke Peter Leopold of Tuscany, but the Maremma benefited by it only after the grand-duke had charged the mathematician Leonardo Nimenes to investigate the hydrostatical problems of the case, and received a favourable report upon Bandini's suggestions.

[*Della fisica riduzione della Maremma Senese di L. Ximenes*, Firenze, 1769, nella stamperia di Fr. Moucke, in 4°. And, reply to a critic in 1775, *Esame dell' esame d'un libro sopra la Maremma Senese*, Firenze, 1775, G. Cambiagi.] M. P.

BANFIELD, THOMAS C. (first half 19th century). The most important of Banfield's writings is the *Organisation of Industry*. Having lived some years in Germany, he was led to study the works of continental economists, then little known in England, and his book owes special debt to HERMANN and ROSSI. By the *Organisation of Industry* he means a graduated scale of industries, corresponding to a graduated scale of human wants, and depending on the axiom that the satisfaction of a primary want at once gives rise to a secondary; *e.g.* "in proportion as food grows abundant, the other wants rise in importance, and a constantly expanding series of desires is awakened, which are classified according to their different grades of pressure" (Lecture III. p. 60). The cheapening of the means of satisfying the more urgent wants creates savings, which are necessarily spent in satisfying the second—an argument for free trade. His criticisms of other economists (*e.g.* RICARDO) are not always convincing, and his own definitions are not always precise. But his remarks on commercial history and on the economical features of his own time are often acute and suggestive.

Professor JEVONS, in his *Political Economy* (1871), has pointed out some passages where Banfield has, in some degree, anticipated the main theorems of that work.

Six Letters to Sir Robert Peel on the Dangerous Tendency of the Theory of Rent advocated by Ricardo, 1843.—*Four Lectures on the Organisation of Industry*, delivered at Cambridge, 1844, published 1845. Translated into French, by Émile Thomas, 1851. — *The Progress of the Prussian Nation*, since 1805 (from Dieterici), *Journal of Statistical Society*, 1848.—The *Statistical Companion* for 1848, 1850, etc. (T. C. Banfield and C. R. Weld). — *The Industry of the Rhine* in Knight's Weekly Volumes, 1846, 1848.—*A Letter to W. Brown, M.P.*, on his system of Decimal Coinage, 1855.—Articles in the *Mining Journal*. J. B.

BANKING*

Bank of England, p. 92; *Banks*: England and Wales, p. 93; Scotland, p. 95; Ireland, p. 96; India and Colonies, p. 97; Bank of France, p. 97; *Banks*: France, p. 98; Bank of Germany, p. 98; *Banks*: Germany, p. 99; Chartered Banks in Scotland, p. 100; Banks in Canada, p. 100; United States National Banks, p. 102; Early European Banks—Amsterdam, p. 104; Genoa, p. 104; Hamburg, p. 105; Rotterdam, p. 106; Middelburg, p. 106; Sweden, p. 104; Venice, p. 108; Land Banks, p. 106; Do., Germany, p. 106; Popular Banks, Germany, p. 109; Do., Italy, p. 109; Savings Banks, p. 110; *Bank Notes*, p. 111; Laws in different Countries, p. 112; National Banks U.S., p. 113.

BANKS, UNITED KINGDOM. The business of banking, generally speaking, consists in taking money on deposit, and also, in issuing drafts, by which the transfer of loanable capital is facilitated. The funds thus obtained, together with those supplied by the capitals of the banks themselves, are employed in making advances, in the discount of bills, and in investments in first-class securities, such as the public funds; some part being kept in cash to meet current requirements. The

proportion to be employed in these methods depends on the circumstances of each individual bank. No absolute rule can be laid down. The judgment of the banker is shown in the use he makes of the capital intrusted to him. In a general way the maintenance of a reserve of resources immediately available, to the extent of a third of the liabilities, may be regarded as adequate. The assistance which a judiciously worked system of banking gives to the economic development of a country is enormous; it enables capital to be transferred from those persons by whom, and from those places where, it is not required for active use to those requiring it. Both sides, the borrower and the lender, gain from the operation. The one obtains some interest for his money when placed on deposit—the spare cash which he does not need for immediate use. The other obtains the aid of an instrument of credit which enables him to carry on his business, and which would otherwise be out of his reach. The following observations apply to the principal countries in which methods of banking exist.

BANK OF ENGLAND. The Bank of England was founded in 1694 by act of parliament (Ways and Means Bill) of 1694, 5 William and Mary c. 20. It afforded an immediate and powerful support to the government, and also to the inland trade of the country. By its original constitution it was authorised to deal in bullion and bills, to issue notes, and to make advances on merchandise. At that period, and for a long time afterwards, the issue of notes formed a very large part of the business of banking. To trace the development of the Bank of England in detail here would extend beyond the limits to which these remarks must be confined. The Bank has rendered very important services to the government in times of war and difficulty, and also to the trade and commerce of the country.

The charter under which it was founded was periodically renewed till it was superseded in many respects by the Bank Act of 1844. In the interval between its foundation and that date the most important event which befell the bank was the suspension of specie payments 1797-1821 (see BULLION COMMITTEE, REPORT OF). At the present time the Bank of England forms the centre of banking operations in the United Kingdom. Three principal reasons have led to its holding this position. These are, that it is the issuer of the only note circulation which is legal tender, that it is the banker of the government, and also of the other bankers of the country. Owing to the last-named circumstance the reserve of the Bank of England is, practically, at the present time, the only unused money in the country available for any sudden demand, either of a domestic or a foreign character. The position which a bank so circumstanced holds is unique; and hence, though less distinctly now than in former years, the bank rate of discount is regarded as the authoritative guide to the current rate of discount. That it is less distinctly a guide now than formerly is due to the fact that modern arrangements have placed enormous sums, as deposits, in the hands of other banks; still the pre-eminence of the Bank of England is generally recognised, and in any time of difficulty or distrust its actions are watched with the most sedulous anxiety, and it is not too much to say that at such times the fate of the commercial prosperity of the community lies in its hands.

The constitution of the governing body of this powerful institution is very simple. The court of directors numbers twenty-six. This includes the governor and deputy-governor and twenty-four directors, chosen from the old-established firms in the city. Custom has excluded English bankers from this body, but members of the powerful firms employed in negotiating foreign loans and in foreign bill-broking are considered eligible. The directors are practically self-elected. The respect due to the high position they hold has been well maintained by the high standard of character observed. The Bank of England, acting as agent of the government, naturally becomes the holder of the bullion reserve of the country, as by law the bank is bound to receive all gold bullion offered to it of standard value, at the price of £3 : 17 : 9 an ounce, retaining the practical difference of 1½d. between this sum, and £3 : 17 : 10½ the mint price (see MINT), as a remuneration for its trouble. Importers may, if they prefer, take the BULLION direct to the mint and receive new coin at the rate of £3 : 17 : 10½ an ounce for it themselves. But the trouble of doing so, and the delay which always ensues, causes the bullion to be brought to the bank by preference. Here it makes its way to the issue department and forms the basis of the note circulation of the bank for the amount beyond that allowed to be issued on securities. For the connection between the bank note circulation and the other operations of the bank see BANK NOTE. As a bank the Bank of England receives large amounts of deposits, on which it allows no interest whatever. Suggestions have often been made that it should do this, but, were the bank to compete with the other banks in this manner, it is hardly likely that the other banks would continue to keep the large balances they do with it. These balances are always large. No statement respecting them has, however, been published since 1877, but at times they have exceeded the reserve. The balances of the London bankers are held with the bank in connection with the clearing house transfers (see CLEARING HOUSE). As a discounter of commercial paper the business of the bank is largely exceeded at present by other financial institutions, but it is

still the ultimate resort of all who want to borrow and find other banks closed to them.

The average minimum rate of discount per cent of the Banks of England, France, and Germany for 1853-1922 was—

Year.	Bank of England.	Bank of France.	Bank of Prussia.[1]
	£ s. d.	£ s. d.	£ s. d.
1853	3 13 10	3 5 0	4 5 0
1854	5 2 3	4 6 0	4 7 0
1855	4 17 10	4 9 0	4 2 0
1856	6 1 2	5 10 0	4 19 0
1857	6 13 3	6 3 0	5 15 0
1858	3 4 7	3 14 0	4 10 0
1859	2 14 7	3 9 0	4 4 0
1860	4 3 7	3 13 0	4 0 0
1861	5 5 4	5 10 0	4 0 0
1862	2 10 7	3 16 0	4 0 0
1863	4 8 2	4 13 0	4 2 0
1864	7 8 0	6 10 0	5 6 0
1865	4 15 4	3 14 4	4 19 0
1866	6 19 0	3 14 0	6 4 0
1867	2 10 9	2 14 0	4 0 0
1868	2 1 11	2 10 0	4 0 0
1869	3 4 2	2 10 0	4 2 0
1870	3 2 0	4 0 0	4 17 0
1871	2 17 8	5 14 0	4 3 0
1872	4 2 0	5 3 0	4 6 0
1873	4 15 10	5 3 0	5 1 0
1874	3 13 10	4 6 0	4 7 0
1875	3 4 8	4 0 0	4 14 0
1876	2 12 1	3 8 0	4 3 0
1877	2 18 0	2 5 3	4 8 0
1878	3 15 8	2 4 2	4 6 9
1879	2 10 4	2 11 10	3 14 3
1880	2 15 4	2 16 10	4 4 10
1881	3 10 0	3 17 6	4 8 6
1882	4 2 8	3 15 4	4 10 3
1883	3 11 4	3 1 5	4 1 0
1884	2 19 1	3 0 0	4 0 0
1885	2 17 7	3 0 0	4 2 5
1886	3 1 0	3 0 0	3 5 8
1887	3 7 0	3 0 0	3 8 4
1888	3 5 11	3 1 11	3 6 6
1889	3 10 11	3 1 8	3 13 7
1890	4 10 5	3 0 0	4 10 5
1891	3 5 2	3 0 0	3 15 4
1892	2 10 7	2 13 11	3 4 1
1893	3 1 0	2 10 0	4 1 5
1894	2 2 3	2 10 0	3 2 6
1895	2 0 0	2 2 0	3 2 7
1896	2 9 8	2 0 0	3 13 3
1897	2 12 8	2 0 0	3 16 3
1898	3 4 10	2 4 0	4 5 1
1899	3 15 0	3 1 5	5 0 5
1900	3 19 3	3 4 8	5 6 6
1901	3 14 4	3 0 0	4 1 11
1902	3 6 7	3 0 0	3 6 6
1903	3 15 0	3 0 0	3 16 9
1904	3 6 1	3 0 0	4 4 7
1905	3 0 1	3 0 0	3 16 3
1906	4 5 3	3 0 0	5 2 11
1907	4 18 5	3 9 3	6 0 7
1908	3 0 4	3 1 0	4 15 6
1909	3 0 3	3 0 0	3 18 5
1910	3 14 5	3 0 0	4 6 11
1911	3 9 4	3 2 9	4 7 11
1912	3 15 6	3 7 5	4 18 10
1913	4 15 5	4 0 0	5 17 8
1914	4 0 9	4 4 5	4 17 10
1915	5 0 0	5 0 0	5 0 0
1916	5 9 7	5 0 0	5 0 0
1917	5 0 0	5 0 0	5 0 0
1918	5 0 0	5 0 0	5 0 0
1919	5 3 0	5 0 0	5 0 0
1920	6 14 3	5 14 7	5 0 0
1921	6 2 5	5 15 10	5 0 0
1922	3 13 10	5 1 11	6 5 10
Average from 1853-1922	3 17 2	3 13 0	4 8 2

[1] Since 1876 the Imperial Bank of Germany.

The ten yearly averages are as follows:

Years.	Bank of England.	Bank of France.	Bank of Prussia.[1]
	£ s. d.	£ s. d.	£ s. d.
1853-1862	4 8 8	4 7 6	4 8 2
1863-1872	4 2 11	4 2 3	4 11 11
1873-1882	3 7 10	3 8 11	4 5 9
1883-1892	3 5 11	3 0 0	3 14 9
1893-1902	3 0 7	2 11 3	3 19 8
1903-1912	3 12 6	3 2 1	4 10 11
1913-1922	5 1 11	4 19 8	5 4 2

It appears hence that the London money market has, on the average of seventy years, been cheaper than that of Berlin. Throughout, with a few exceptions, the value of money in England has, on average, been dearer than in France.

England and Wales. The origin of banking may be traced even further back than the habit of depositing money with the London goldsmiths, which was in full vigour by the end of the 17th century. Banking in the provinces was at the outset more dependent on the issue of notes than that of the metropolis, which naturally resulted from the difference of its field for operations. The history of the bank of Dundee may be taken as an illustration, for in this the habits of Scotch and of English provincial banks may be regarded as a good deal similar (see Banks in Scotland). The early employment of credit in this manner led to results which govern, or at least largely influence, the banking system of this country to the present day. The value ascribed to the power of issuing notes led to the act of 1708, which restricted the number of partners in banks of issue, and virtually in all banks, to a number not exceeding six during the continuance of the Bank of England. This restriction lasted till the year 1826, when the establishment of joint-stock banks of issue was permitted; it was further modified by the act of 1862, which allowed private partnerships, not being banks of issue, to have ten members. The Act of 1833, however, prohibits any English joint-stock bank of issue from possessing a banking office in London. The act of 1844 restricts the privileges of issuing notes to those banks whether private or joint stock, which possessed the privilege at that date. The main object of the early legislation was to secure a monopoly of issue to the Bank of England. Incidentally it has served to prevent English banking from taking its proper development. In this the act of 1844, the latest of Sir Robert Peel's acts dealing with monetary questions, has also assisted. His object in this was to cause the note issue of the country to centralise in the Bank of England, and to provide that, with the exception of the notes allowed to be issued against securities, an equivalent value in the precious metals should be held against

the amount in circulation in the case of the notes issued by that bank (see BANK NOTE). Through the restrictions imposed on dealing with the power of issuing notes by this act, the existence of a considerable number of comparatively small banks of issue was continued in England long after the time when, judging by the analogy of events in Scotland and Ireland, coalition into larger concerns would have been desirable. The attention of the legislature in England has in the past been directed mainly to the note issue, with a view to centralise it, and little thought has been given to other points of equal importance to the wellbeing of the banking system. However, with the absorption of Messrs. Fox, Fowler & Co., of Wellington, Somerset, by Lloyds Bank Ltd., as from 1st January 1921, disappeared the last of the English private banks entitled to issue its own notes. The Bank Charter Act of 1844 gave the Crown power to increase the Bank of England's fiduciary issue to the extent of two-thirds of the authorised issues of any country banks which might cease to issue notes, and in February 1923 the fiduciary issue was increased from £18,450,000, at which it was fixed in 1903, to £19,750,000. It has, therefore, now reached, in round figures, the limit contemplated in the 1844 Act. It is not necessary to refer here to the detail of our banking system. It may be sufficient to remark that in hardly any other country are the positions and circumstances of individual banks so widely different from each other as in our own. One result, and it is a very peculiar one, of the manner in which our banking system has developed itself, employing the Bank of England as the pivot of its transactions, is that no bank in the country keeps any large stock of the precious metals in reserve—more, in fact, than habit has shown to be adequate for daily requirements, except the Bank of England. By this method economy in use of metallic money has been greatly promoted, with corresponding advantages to the community. The necessary drawback to this is that in times either of panic or of foreign demands for bullion, the strain on our banking system becomes extremely sharp, and the troubles of the time greatly intensified (see DRAIN OF BULLION and CRISIS). The reserve of the Bank of England appears to those outside the business to be "idle money," but no portion of our monetary resources really has so important a part to play, or is so entirely "employed" as the bankers' balances, which figure in that reserve, and sometimes exceed it in amount. Through the agency of our system "English capital runs as surely and instantly where it is most wanted, and where there is most to be made of it, as water runs to find its level." The ramification of our banking system to every small town and village enables our monetary resources to be economised to the utmost; thus persons requiring advances, whose position justifies their being made to them, are enabled to obtain the advantages which the use of capital will afford, both in remote places and in our larger commercial and industrial centres. The amalgamations and absorptions in recent years, coupled with a small number of bank failures, have reduced the number of banks in England and Wales to thirty-three, of which five are pre-eminent in size and importance, but the process has given strength and stability to our banking system. In view of the fears expressed in recent years that the course of bank amalgamations might result in something in the nature of a Money Trust which would be detrimental to the best interests of the community, a Treasury Committee on the subject was appointed in 1918. The Committee, while it regarded some of the dangers feared as "somewhat problematical and remote," considered the possible dangers of further large amalgamations material enough to outweigh the arguments against Government interference, and in accordance with their recommendations a statutory Committee was set up to which all such schemes must now be submitted for approval. The extension of banking throughout the provinces of late years has been very marked. The number of branches of the banks which form the "big five" joint stock banks of this country was in 1902, 3660; in 1912, 5192; and in 1922, 6904. Excluding the figures of the Bank of England, the total of deposits, current accounts, and note circulation of the English banks has grown from £1,174,000,000 in 1914 to £2,285,000,000 in the year 1922. The publication of accounts is still not universal though far more general than formerly. Official statistics of the aggregate do not exist. No doubt in some cases undue credit has been given to those who have not been deserving of it, with disastrous results (see CRISIS). In some, but fortunately much rarer instances, the fraudulent have been assisted, or the banks themselves been ruined, by bad trading. But on the whole these results have but seldom occurred, and the prosperity of the country has probably been promoted fully as much by the banking system it has possessed as by any modern adaptation of physical science to the comforts and conveniences of life.

Some banks in the provinces allow interest at a low rate on the daily balances of their customers in their hands; but the more general rule is to make an allowance of interest only on sums placed specially on deposit. This interest usually varies according to the "London" rate for the time being; but some banks allow a fixed and uniform rate. The practice varies in different localities.

SCOTLAND. Considered historically, the distinctive peculiarities of banking in Scotland arose from the fact that the people were allowed by the legislature absolute freedom to create whatever system of banking they found best suited to their wants. Thereupon, before the days of railways and steamboats, every district of the country, however remote, appears to have developed its banker by a process, as it were, of "natural selection." He was the trusted custodian of the savings of the thrifty. He was, on the whole, the discreet and sagacious supporter of the enterprising trader and adventurous man of commerce. His promises to pay gold on demand were readily accepted within his district as a convenient medium of exchange. There was no state bank, though at first the two old chartered banks, the Bank of Scotland and the Royal Bank, had a virtual monopoly. From the end of the 17th century, however, there grew up throughout the country substantial private copartneries conducting the business of banking and serving the important purpose of promoting industry and thrift. At this time the currency doctor had not yet appeared, and the subtle suggestion had not yet been made that a one-pound note, convertible into gold on demand, might be of less value than the coin it represented and for which it could at any moment be exchanged.

The range, however, of banking credit enjoyed by these substantial copartneries was naturally limited to the districts in which they were known, and when facilities of communication and of transit were increased and the scale of commercial transactions became enlarged, it became obvious that banking institutions of more commanding importance and more widely recognised stability were required to take the place of the old local private banks. The three old banks in Edinburgh—the Bank of Scotland, Royal Bank of Scotland, and British Linen Company—had not yet seriously set themselves to serve the country districts. A new chapter was accordingly opened early in the 19th century when joint-stock banks were formed, having their headquarters in Edinburgh, Glasgow, and some of the other more important towns, with numerous branches throughout the provinces. This proved to be the knell of the private banks, for by degrees these ancient institutions, being free to transfer themselves in their integrity, were merged in the more powerful joint-stock banks, and the system of banking as a whole became adapted to the enlarged operations of commerce.

The movement thus described involved, among other consequences, a reduction in the number of banks in Scotland. In 1819 there were 36; in 1844, 24; in 1873, 11; in 1923 there were 8. All possess the power of circulation, the limit to each of authorised note issue is as follows:—

NAME OF BANK.	Amount of authorised Circulation.
1 Bank of Scotland	£396,852
2 Royal Bank of Scotland	216,451
3 British Linen Bank	488,024
4 Commercial Bank of Scotland, Ltd.	374,880
5 National Bank of Scotland, Ltd.	297,024
6 Union Bank of Scotland, Ltd.	454,346
7 North of Scotland Bank, Ltd.	224,452
8 Clydesdale Bank, Ltd.	274,321
Total	£2,676,350

The average circulation of these banks, allowed by the Acts of 1844-45 to exceed the authorised limit (see BANK NOTE), was, collectively, £22,647,000 in 1923, their deposits about £255,972,000.

The development of banking in Scotland was greatly assisted by the provisions of the law, which placed no limit on the number of partners, and allowed security to be taken on land, all being registered, as well as on other descriptions of a debtor's property, with great facility. The private fortune of every partner was also liable for all the debts of the bank except in the case of the Bank of Scotland and the two chartered banks. The effect of this last provision has been restricted by the application of the limited liability acts, but the system of banking thus established, assisted by the power of circulating small notes, has extended itself over Scotland with great completeness. Hardly any village is without the advantage of banking facilities, provided by numerous branch offices. The early history of the Bank of Dundee may be taken as typical of the growth of Scotch banking. Originally instituted, 1764, as a bank of issue, it was not till 1792 that deposits were received by it, and these were for some time hardly equal in amount to the note circulation. A similar system was no doubt the origin of banking in the United Kingdom generally. Though the branch offices of the Scotch banks are numerous, the banks themselves, as stated above, are few in number. Amalgamation for the most part, failure in some conspicuous and terrible instances, account for the diminution. The credit of the remaining banks has never been shaken. The deposits, 21 millions in 1826, were 30 millions in 1851. Since that date the growth has been most rapid. Including capital, the resources were 63 millions in 1866, 92 in 1872, and nearly 256 millions in 1923. The old practice of the banks in Scotland of making advances on CASH CREDIT (*q.v.*), that is on the personal security of two bondsmen, tended to develop the energies of the country facilitated by the thriftiness of the people. The system of note circulation in Scotland (see BANK NOTE) has been of great assistance to the banks in many ways, and has provided the banks with "till money" free of

cost. Through its existence the early prosperity of the banking system of the country was developed and fostered; it has caused great economy in the use of specie, and also it has facilitated book-keeping by removing the necessity for the use of small cheques in many directions. The vast network of branch offices, the working of which, as previously mentioned, is facilitated by the use of small notes, is also of great service to the business. In those districts which are poor, and where deposits are scanty, the advances of capital required for the development of business are easily provided from the resources which the wealthier districts supply. The small number of banks in Scotland, however, is sometimes made the subject of complaints. The habits of the people, which lead them to prefer notes to specie in their daily transactions, coupled with the other advantages which the possession of a note circulation gives, have practically restricted banking in Scotland to banks of issue, and as no addition to the number of issuing banks has been possible since Peel's acts of 1844-45, the existing banks have such a hold of the field that no increase has been made since that time. The rates of discount for advances, and those for the allowance of interest on deposit are settled by agreement among the banks; hence they are practically uniform over the whole of the country. While complaints as to the monopoly of the existing banks are thus heard from time to time, it does not appear probable either that the rates of interest charged, or allowed, would differ much, if at all, from those which have been the rule in Scotland under existing circumstances, if the freest competition were established. Nor is it at all likely that any one to whom an advance may safely be made is prevented from obtaining such an advance through the limitation of the number of the banks. Hence the public may not gain wherever such competition is started; on the other hand competition, in the direction of making advances on insufficient security, or to those who employ them in rash speculation, is one of the most disastrous things which can happen.

Two bank failures in Scotland during recent years have been on a scale so large as to deserve special notice. The aggregate loss of the shareholders of the Western Bank of Scotland, failed 1857, was upwards of £2,800,000. The failure of the City of Glasgow Bank in 1878 involved its shareholders in a loss of about £6,000,000. In neither case were the general public losers (see BANKS, CHARTERED; CASH CREDIT).

BANKING IN IRELAND has been conducted generally on the same principles as in Scotland, and hence requires no detailed notice. One point, however, to the great credit of the Irish banks, deserves commemoration, namely, that at the present time of writing (1923) every bank of issue in Ireland which was in existence in 1844 is still carrying on business. The stability which this indicates has not occurred in either England or Scotland. The exceptions to the general prosperity were the stoppage of the Tipperary Joint-Stock Bank (1856), and of the Munster Bank (1885), since replaced by the Munster and Leinster Bank, Limited. This general soundness of recent banking in Ireland may well be contrasted with its laxity, frequently involving consequent failure, at an earlier date. At the commencement of last century, Ireland was overspread with a number of small and principally very ill-managed banks, each carrying on its affairs within a narrow circle, and in a most irregular and unsound manner. The appendix to a parliamentary report (Report of the House of Commons Committee on circulating Paper, Specie, and Current Coin in Ireland, 1804) contains a list of the names of fifty firms, all believed to be engaged in the business at that time. Others who issued notes for small amounts from 3½d. to 6s. each, who had really no pretensions to be called bankers at all, undertook similar responsibilities. By the year 1820, however, only six of the banks were left, the numbers having been reduced principally by failures. The over-issue of notes had led to great distress. The want of confidence resulting from the frequent failures was general, and even the notes of the Bank of Ireland were for a time unnegotiable. The Act of 1820 which permitted the establishment of joint-stock banks, gradually led to the sounder state of affairs mentioned above, but it was not till the amending acts of 1824-25 allowed persons resident in any part of Great Britain or Ireland to become shareholders in these banks that their success became established, as the previous exclusion of English and Scotch capitalists had greatly retarded their welfare (see *History of Banking in Ireland* by Mr. Dillon). The experience of Ireland in banking matters has been very chequered, the injury caused by the earlier and unsound banks having been very considerable, while the assistance given in recent times by the existing banks to the general prosperity, has been equally marked. It only remains to mention the *Bank of Ireland*. This bank was originally projected 1695, but the plan was not carried out then; it was also rejected by the Irish House of Commons 1721, and it was more than half a century afterwards, 1783, that the bank was established. It has been prudently and successfully conducted to the present date. The SUSPENSION OF CASH PAYMENTS, 1797, extended to Ireland, and a very considerable expansion of the note circulation—over-issue it might more properly be termed—followed. This, however, was soon reduced after the return to cash payments.

Considerable privileges were granted to the Bank of Ireland—after 1820 no bank with more

than six partners was allowed to issue notes within a radius of fifty (Irish) miles from Dublin. After 1845 this restriction was removed, and the arrangements as to the circulation of notes practically assimilated to those in force in Scotland (see BANK NOTE). There are nine banks in Ireland, of these six possess the power of circulation.

NAME OF BANK.	Amount of authorised Circulation.
1 Bank of Ireland	£3,738,428
2 Provincial Bank of Ireland . .	927,667
3 Belfast Banking Company . .	281,611
4 Northern Banking Company . .	243,440
5 Ulster Bank	311,079
6 The National Bank	852,269
Total . .	£6,354,494

The average circulation of these banks during the four weeks ending 22nd December 1923 was, collectively, £17,282,000. Their deposits at the end of 1923 amounted to nearly £184,000,000. The Hibernian Bank, Limited, the Munster and Leinster Bank, Limited, and the Royal Bank of Ireland, Limited, have no note issue.

BRITISH COLONIES AND DOMINIONS.* Banking in the colonies and self-governing dominions has to a large extent developed on English lines, and through these colonial banks British capital has been diffused throughout the colonies with beneficial results. Within recent years, however, central banks have been established in Australia, South Africa, and India as a result of legislative enactment. For an account of the formation and development of the Commonwealth Bank of Australia, the South African Reserve Bank, and the Imperial Bank of India, see BANKS, App.

FRANCE. The Bank of France, the most important banking institution in the country, was founded in 1800 as a private company, and received the basis of its permanent constitution, which made it practically a state bank, through the law of 24 Germinal An. xi. of the First Republic (14th April 1803). The law of 22nd April 1806 reconstituted the bank, which is now regulated by the law of 1920. The governor, who holds his office for life, and the two deputy-governors, are appointed by the state. The general council, consisting of fifteen regents, by whom the business is mainly directed, and three censors, who may be regarded as a permanent committee of audit, are elected by the general assembly, which consists of the 200 largest shareholders. Of the regents, five must be chosen from among the manufacturers, traders, and merchants (*manufacturiers, fabricants, ou commerçants*) who are shareholders in the bank, and three selected from amongst the *trésoriers-payeurs généraux*, the treasury agents in the provinces. Thus the government is strongly represented on the managing body. The governor has to watch that "the bank performs its duty to the state and towards the commerce and industry of the country" (evidence given by M. Rouland, then governor, before the *Enquête sur les principes et les faits généraux qui régissent la circulation monétaire et fiduciaire*, Paris, 1865, which see). The governor of the Bank of France has usually been a man who has held a high official position. Thus M. Rouland had been a senator, a minister, and president of the council of state, while M. Denormandie, another governor, was a senator for life. The regents and censors represent the commerce and trade of the country, to which, as well as to the state, the bank has rendered great services. It has (1923) 151 branches situated in the different departments of France, 80 auxiliary offices, and 321 towns are provided with banking facilities. The rules of the bank with respect to its discounts are somewhat strict, three signatures being required, or a deposit of security to take the place of the third name, but the wisdom of the rules has been justified by the results. Thus, there was a discount in round numbers of 22,000,000 bills in 1922 for an amount of nearly Frs. 34,000,000,000. The part the bank occupies in the general business of the country is shown by these figures, and as almost 26 per cent of the bills taken at Paris alone did not exceed Frs. 100 in value, retail as well as larger trade shares in the advantage. Business in France is, however, not connected so intimately with banking as in England. The authorised maximum note issue, as fixed by decree of 28th September 1920, is Frs. 41 milliards, and the note circulation on 23rd December of that year was nearly Frs. 36 milliards. The Bank of France, however, endeavours to extend the use of cheques among its customers. Through the *Bureau de Virements* it performs the function of the CLEARING HOUSE (which see), and it likewise facilitates the transmission of money between the towns in which the branches are situated and the head office. The Bank of France endeavours to keep an even rate of discount with as few alterations as possible, as it considers a tolerable degree of certainty in the charge for the use of money to be, as is undoubtedly the case, of service to trade. Thus for the twelve years 1911 to 1922 there were 11 changes in its rate of discount varying from 3 to 6 per cent, while there were 31 changes varying from 3 to 10 per cent at the Bank of England during the same time. The maximum discount rate given in each case was that imposed on 1st August 1914. The rate charged is uniform at Paris and the branches, both for discounts and advances, the latter being from ½ to 1 per cent above the discount rate. These rates are invariable, and no addition is made for commission

or otherwise. Of the total productive operations of the bank, amounting in 1922 to Frs. 68,779,399,900, much originates at the branches. At some of these, particularly at Bordeaux, Lyons, Marseilles, Havre, and Lille, the transactions are large. Some of the smaller offices, however, occasionally do not pay their expenses. This fortunate position of affairs has not always been maintained, but the deficiencies have been comparatively small. The Bank of France is at liberty to pay its notes and discharge its obligations either in gold or in silver of legal tender, that is, in silver pieces of 5 francs. It is argued that this facility assists it to maintain a comparatively even rate of discount, even in the face of a movement in the foreign exchanges favourable to an export of gold, as it is absolutely at liberty to give or withhold gold so long as it has silver with which it can cash its notes. This argument can hardly be proved or disproved statistically. As a matter of fact the number of alterations in the rate of the Bank of France has been fewer since the year 1844 than at either the Bank of England or at the Bank of Germany. The rate of discount has been on average less than at the Bank of England during the last seventy years, taken as a whole (see Table, BANK OF ENGLAND), though not so during the year 1922. In making these observations, however, the great difference between the condition of circumstances in the countries concerned should be borne in mind. Besides assisting commerce and the general prosperity of France, the Bank of France has more than once in its history had to support the weight of very serious troubles, the proper handling of which exceeded in difficulty almost any ordinary financial crisis. Without going back into its earlier history, specie payments have been suspended three times owing to political disturbances—in 1848, in 1870, and in 1914. The earliest of these suspensions, which lasted only about a year and a half, does not appear to have had any marked effect on prices. The second, which was accompanied by the devastation ensuing on the Franco-German War, lasted about five years, specie payments, suspended in 1870, having been partially resumed in 1874 and completely in 1875. A suspension of specie payments may naturally be expected to produce the ordinary result of inflation, shown in the foreign exchanges and in the price of commodities. But the course which the Bank of France took in regulating its issue of notes, which became the circulating medium and were inconvertible, was so prudent and cautious that few, if any, of the dangerous results of a forced circulation of paper followed. There was, during the course of this time, a slight, but not large variation from the normal rate of the foreign exchanges, exemplified in the rate between Paris and London on several occasions, but it was slight, and if any alteration in the prices of commodities followed it was only small in extent. Great caution and prudence must have been needed to carry on the monetary affairs of a large country under such trying circumstances without involving it in the risks which usually follow on a forced circulation.

The total of the Bank's permanent and gratuitous advances to the state as fixed in 1911 is Frs. 200 millions, to be repaid on the expiration of the Bank's privilege of note issue. As from the commencement of the War special advances were authorised, and the maximum rose to 27 milliards. This was reduced, as from 1st January 1922, to 25 milliards. The Budget position, however, did not permit of a reduction of more than 1 milliard in the year 1922, and the maximum of advances was accordingly reduced to 24 milliards.

Besides the Bank of France there are many other large banks in the country, as the Comptoir d'Escompte, founded 1848, the Crédit Foncier, and Crédit Mobilier, 1852, the Crédit Lyonnais, 1863, the Société Générale, 1864, besides others, and many very wealthy and powerful private firms who carry on the practice of banking and the traditions of the *Haute Banque*, which rather corresponds to the business of wealthy merchants and high financial operators with us. The idea of banking as carried on in this country, in the United States, and in several of our colonies, notably in the Australias, is, however, gradually gaining ground in France, and further developments in that direction may be expected.

[See Fisk, *French Public Finance* (New York, 1922).]

GERMANY. At the time of writing (December 1923) the entire lack of confidence and stability in Germany makes it impossible to give an up-to-date account of the banking situation in that country, and, inasmuch as the present condition of affairs is a departure from the normal, it has been considered best to leave the article practically as it appeared in the previous edition. The Imperial Bank of Germany occupies now quite as commanding a position in that country as the Bank of France does within its own sphere of labours, and, with the other powerful banks surrounding it, has assisted greatly the prosperity of the Empire. The present constitution of the Bank of Germany is defined by the Bank Act of 1875, by which the Bank of Prussia was merged in the Imperial Bank, and amended by the acts of 1889, 1899, 1901, 1902, 1906, 1909 (see Annual Reports in *Bankers' Magazine*). In arrangements for accounts, in number of offices, —440 in 1923,—in closeness of relations with

the government, the working of the Bank of Germany corresponds very much with that of the Bank of France. There is, however, an important difference in respect of the note circulation (see BANK NOTE), to which, as the arrangements are dissimilar both from those in England and in France, it is desirable to refer. The Bank of Germany is permitted to add to its circulation against securities the issue of any other issuing bank whose circulation drops, and also to exceed the legal limit, at first (1875) by £12,500,000, extended 1899 to £22,500,000, 1902 to £23,500,000, 1906 to £23,641,450 by lapse of issue of the Bank of Brunswick, 1909 to £27,500,000 and at the end of each quarter £37,500,000, on payment of a tax of 5 per cent per annum on the total excess issue. The limit was exceeded nineteen times in 1913, the rate of discount not rising above 6 per cent. Those who have experienced the effect of the suspension of the Bank Act of 1844 in England see in the smoothness with which this arrangement acts a sign of a corresponding absence of pressure on business of great advantage to the industry of Germany, and though the different circumstances of business there do not admit of an exact comparison with England, the question deserves more attention than is given it. The Bank of Germany is a "state bank." The distribution of the profits (laws of 1875, 1889, 1899, 1909) is as follows: 3½ per cent on the capital (£9,000,000) to the shareholders; of the remainder, the State receives three-quarters and the shareholders one-quarter, after deducting from these two portions 10 per cent (*i.e.* half 10 per cent from each portion) to be assigned to the Reserve (£3,723,963 in 1913). Thus the shareholders received in 1913 £758,750, or a dividend of 8·43 per cent, and the state £1,551,025 in addition to the Note Tax £183,715. The capital £6,000,000 in 1900 was raised to £9,000,000 in 1905. The German emperor appoints the president and council of the bank directory, whose office is for life, on the recommendation of the federal council, and the Government, through the Chancellor of the empire, exercises complete powers of control. The shareholders influence the management through a committee. As with the Bank of France, the arrangements as to rates of interest are uniform over the whole field of operation, and the facilities given by this, and by the action of the bank in the discount of commercial paper, as well as by the transmission of cash, etc., have given a great impetus to the prosperity of the empire. There are many other banks in Germany besides the Imperial Bank, four of which issue notes. This privilege has been relinquished by many banks once possessing it, owing to the restrictions imposed on banks of issue, which may not buy and sell securities for delivery, either for their own or for third account, nor may they accept any bills nor (1913) in some conditions discount below the Reichsbank. The business of the non-issuing banks in Germany, besides ordinary account current transactions, consists in discounts, buying and selling securities, granting advances to customers and also in negotiating loans for governments as well as private undertakings, a business which in this country is more in the hands of private bankers and finance companies. The banks also hold large deposits; yet this branch does not attain the same proportionate dimension as in Great Britain, the amount of uninvested capital being smaller; and as interest is allowed on almost all balances, even if repayable on demand, the profit from this source cannot compare with the results obtained in this country.

The limits of space forbid detailed reference to several other banking systems both in Europe and elsewhere, but among these the Swedish Enskilda Banks may specially be referred to as having possessed until 1897 a very skilfully planned note circulation, the usefulness of which compared favourably with the systems of circulation in Scotland and in the United States before the establishment of the Federal Reserve System (see BANK NOTE; BANKS, NATIONAL, UNITED STATES OF AMERICA).

[See Reports, *Committee of Secrecy on Bank of England Charter*, H. of C. 1832.—*Select Committee on Banks of Issue*, H. of C. 1840.—*First and Second Reports Select Committee on Banks of Issue*, H. of C. 1841.—*First and Second Reports Secret Committee on Commercial Distress*, H. of C. 1848.—*Report Select Committee on Bank Acts*, H. of C. 1857.—*Report Select Committee on Bank Acts*, H. of C. 1858.—*Report Select Committee on Banks of Issue*, H. of C. 1875.—*Report from Secret Committee of the House of Lords on the Causes of the Distress which has for some time prevailed among the Commercial Classes, and how far it had been affected by the Laws for regulating the Issue of Bank Notes payable on demand*, Session 1847-48. (The information contained in the evidence and report especially valuable.)—*Practical Treatise on Banking.—Logic of Banking*, J. W. Gilbart (title characteristic of the author).—*History and Principles of Banking*, J. W. Gilbart, London, 1866.—*The Country Banker*, George Rae, London, 1886, 6th ed. 1918.—*Notes on Banking*, R. H. Inglis Palgrave, London, 1873.—*British Banking Statistics*, John Dun, London, 1876.—*Present Day Banking*, F. E. Steele, London, 1909.—*Lombard Street*, W. Bagehot, London, 1873, 1915.—*History of the Bank of England*, John Francis, London, 1847.—*The First Nine Years of the Bank of England*, J. E. Thorold Rogers, Oxford, 1887.—*The Scotch Banks and System of Issue*, Robert Somers, Edinburgh, 1873.—*History of Banking in Scotland*, A. W. Kerr, 1918.—*History and Development of Banking in Ireland*, Malcolm Dillon, London and Dublin,

1889.—*Banking and Currency*, Ernest Sykes, 5th ed., London, 1923.—*Principles of Banking*, Thomson Hankey, London, 1887.—*Practical Banking*, A. S. Bolles, New York, 1884.—*Bank Rate, England, France, and Germany*, R. H. Inglis Palgrave, London, 1903.—*History, Law, and Practice of Banking*, C. M. Collins, London, 1887.—*Banking and Currency*, W. J. Weston, London, 1922.—*Bankers' Magazine*, London.—*Journal Institute of Bankers*, London.—*American Bankers' Magazine*, New York.—*Dictionnaire des Finances*, Paris, 1889.—*Chapters on the Theory and History of Banking*, C. F. Dunbar, New York, 1904.] R. H. I. P.; F. W. G.

BANKS, CHARTERED (SCOTLAND). 1. The Bank of Scotland; founded by Scots act of parliament 17th July 1695, not by charter, though frequently called one of the chartered banks; a monopoly of banking for twenty-one years from 1695; a capital of £100,000 sterling, since raised to £1,987,000 (£1,325,000 called up), with power to issue £2,625,000 additional stock. 2. The Royal Bank of Scotland; first charter 31st May 1727 in pursuance of the imperial statute, 5 Geo. I. c. 20; eighth, 30th December 1829; capital £2,000,000, fully paid up; it is questionable how far a provision in the original charter of 1727 that each share of £100 is liable in five farther calls of £10 each is applicable to present shareholders. 3. The British Linen Company; charter 6th July 1746 as linen traders and manufacturers; banking business developed; charter 1806 (5th June) as bankers, capital £200,000; last charter 19th March 1849, authorised capital £1,500,000, whereof £1,250,000 issued and fully paid up. The above three are known as the chartered banks; they claim limited liability (see COMPANY for purposes of charter). The National and the Commercial Banks have also charters; the former 1825, the latter 1831 (bank founded 1810); in both charters liability stated to be unlimited. See Mr. Fleming's "Memorandum as to Banking in Scotland," Select Committee on Banks of Issue, 1875, reprinted in Henry Robertson's *Handbook of Bankers' Law* (Scotch). The three oldest, Bank of Scotland, British Linen Company, and Royal Bank, have always had or claimed a strictly limited liability: the two named above, in common with the remaining three Scotch banks, the Clydesdale, North of Scotland, and Union, have now been registered as limited liability companies, and use the word "Limited." A. D.; F. W. G.

BANKS, CANADA. The history of currency and banking in Canada may be divided into four periods: (1) the French régime;—(2) from beginning of British government until establishment of first banks in 1817-18;—(3) from 1817-18 until confederation of provinces, 1867, banks being organised under provincial and royal charters;—(4) since 1867, the Dominion parliament having exclusive jurisdiction regarding banking.

A complete account of the first period, during part of which beaver and moose skins were recognised currency, wheat a legal tender, and the "card money" of the French governors formed the chief medium; and the second period when the coins of five other countries were legal tender, will be found in the writings of Mr. James Stevenson referred to below. During the second period unsuccessful attempts were made in 1792 and 1807-8 to establish banks, and in consequence during the war of 1812 government was obliged to create an army-bill office or temporary bank of issue.

From 1817 to 1825, however, two banks were established in Lower Canada (Quebec) and one each in Upper Canada (Ontario), New Brunswick, and Nova Scotia, all now doing business except one. During the rebellion of 1837-38 the banks in Upper and Lower Canada temporarily suspended specie payments under permission of an order in council.

Before dealing with the fourth period it is necessary to indicate the condition of banking and currency at time of confederation, 1867. There were thirty-nine charters, but only twenty-seven banks doing business. The charters expired at various dates from 1870 to 1892 and varied in accordance with views regarding banking in the different provinces. In Upper and Lower Canada (Old Canada) shareholders were liable for double amount of stock, except that there was one bank *en commandite*, the "principal partners" having unlimited personal liability. In most cases notes could be issued equal to paid-up capital *plus* specie, and government securities held. In New Brunswick charters had been granted without double liability but the principle was being insisted on in renewals, while in Nova Scotia in the opinion of some there was no double liability. In Old Canada and Nova Scotia as a rule total liabilities were restricted to three times, and in New Brunswick to twice the amount of capital. There was also one bank with a royal charter, head office in England, and shareholders not under double liability. The situation was further complicated by the "Free Banking Act," under which notes could be issued secured by deposit of government debentures, and by the legal tender issues of the governments of Old Canada and Nova Scotia. In 1866-67 two of the largest banks in Upper Canada failed, resulting in a very severe financial crisis.

Under these conditions, and after tentative legislation in 1867 and 1870, the first general bank act of the Dominion was passed in 1871 (34 Vict. c. v.) It confirmed the special features in the bank working under royal charter, and that with "principal partners" personally liable, and it will be understood in any statements hereafter regarding banks as a whole that these institutions are not referred to. As the charters of other banks expired they were renewed under the Dominion Act. The

first act extended all charters ten years, which practice has been followed thus far. There were various amendments during the first few years, but since then changes have been infrequent, except at the regular renewal of the charters. At the renewal of the charters in 1923 the establishment of a state bank was suggested but was successfully opposed by the banks.

Constitution and Powers of Banks.—Banking in Canada is not absolutely *free* as in the United States until recently. A charter must be obtained by application to parliament, and this of course could be refused. Practically, however, banking cannot well become a monopoly. The minimum subscribed capital permitted is $500,000 (say £100,000), of which $250,000 (£50,000) must be paid up, and the fact assured by the money being deposited temporarily in the finance department, after which, on compliance with other important requirements, the treasury board will issue permission to do business. Shares are held subject to what is known as double liability, *i.e.* in the event of the bank's assets being insufficient to pay its debts, a shareholder is liable for the deficiency to the extent of an amount equal to the par value of his shares, in addition to any amount unpaid on such shares. Shareholders do not escape the double liability by transfer, unless a period of sixty days has elapsed before suspension. There are elaborate regulations as to the constitution and duties of the board of directors, which cannot be fully explained here. Directors become personally responsible if dividends are declared impairing the capital, and no division of profits in any shape exceeding 8 per cent per annum is permitted, unless the reserve fund or rest equals 30 per cent of the paid-up capital. The act prescribes the form in which the directors' annual report to shareholders shall be made, and requires most comprehensive monthly returns to the finance department, which are printed and discussed in the leading newspapers. The finance minister may call for special returns from any bank at any time. A list of shareholders in all banks, with their holdings, is published by the government annually. A return of all dividends and balances unclaimed for five years is required annually, and in the event of a bank's insolvency such amounts must be paid over to government to be held for owners. The statute of limitations does not run as against depositors in favour of banks. There are numerous provisions as to a bank's power to take securities for loans. Banks may not lend upon security of real estate. The act abounds with heavy penalties for breach of its provisions.

Note Issues.—In the successive banking acts of the Dominion parliament banks have been empowered to issue circulating notes to the extent of the unimpaired paid-up capital. By the first act the noteholders had no greater security than other creditors. At the renewal of charters (1880) the circulating note was made a prior lien upon all assets; and at the renewal in 1890 the banks, at their own suggestion, were in addition required to create in two years a guarantee fund of 5 per cent upon their circulation, to be kept unimpaired, the annual contribution, however, if fund is depleted, to be limited to 1 per cent. The fund is to be used whenever the liquidator of a failed bank is unable to redeem note issues in full after a lapse of sixty days. Notes of insolvent banks are to bear 5 per cent interest from date of suspension, until liquidator announces his ability to redeem. Banks are also required to make arrangements for the redemption at par of their notes in every part of the dominion. The change in 1880 was caused by the failure of a small bank with a circulation of about $125,000 (say £25,000), paying all creditors only 57½ per cent. The Bank Act of 1906 with the amendments of 1908 was due to the demand for a currency which would pass over the entire dominion without discount under any circumstances. The history of banking in Canada since confederation shows no instance in which depletion of the guarantee fund would have occurred. Fines from $1000 (£200) to $100,000 (£20,000) may be imposed for over-issue of notes. The pledging of notes as security for a debt, or the fraudulent issue of notes in any shape, renders all parties participating liable to fine and imprisonment. As the crown prerogative to payment in priority to other creditors had been set up on behalf of both dominion and provincial governments, the act places the claims of the Dominion second to the note issues, and those of the provinces third. Notes of lesser denomination than $5 (£1) may not be issued, and all notes must be multiples of $5 (£1). Notes smaller than $5 are issued by the Dominion government. With a Circulation Redemption Fund, at the end of 1922, of $6,090,996 (£1,218,200), and capital paid $125,004,717 (£25,000,000), the banks had in circulation only $162,849,250 (£32,569,850). Besides these assets, the double liability of shareholders gives a further considerable security. The circulation expands and again contracts during three months in each year, greatly owing to the products of Canada being still mainly of the forest and field. This fact, and the necessity for till money without cost at the branches, have caused Canadian bankers steadily to oppose a currency secured by special deposit of securities. During the period since confederation the banks have provided a currency readily convertible into specie, the volume rising and falling with requirements of trade, and this, apart from legal tender notes of the Dominion, is almost the only class of money in constant use. The amount of Dominion notes (legal tenders) held by the banks in July 1923 was about

$157,477,000 (£31,495,400) and the actual specie held was £14,121,000. The deposits held by the banks were £422,694,000.

Reserves.—No reserves are actually required by law. The cash reserve in gold and legal tenders has averaged for some years about 10 per cent. Till money is almost entirely supplied by the note circulation. The smaller banks keep their available reserve in deposits with the leading banks in Montreal. The larger banks have their immediately available reserves largely in security loans in New York and Chicago. Forty per cent of whatever cash reserve a bank may choose to keep must be in Dominion legal tenders, a provision entirely in the interest of the government.

Branch System.—Perhaps because the first bankers in Canada were to a great extent English and Scotch, the branch system has become so firmly established that there are no banks without branches. Altogether there are over 4000 bank offices—including 234 city branches in Toronto, administered by twenty-one banks—the largest number by any one bank being 677, two others having 598 and 504. These three have branches from Halifax on the Atlantic to Vancouver on the Pacific, a distance of about 3500 miles. Any town of 1000 or 1500 people may thus have a bank of deposit and discount of high standing, and administered by a trained bank officer. Slowgoing communities where deposits accumulate thus provide the means of satisfying the wants of new and enterprising localities, where the demand for money is out of all proportion to local supply. As a result of this economy in the distribution of capital, and the advantages arising from till money without cost, and the profits of circulation, rates of interest in Canada are as low or lower than in any country except the three or four leading nations of the world, and Canadian banks cannot go to Great Britain for deposits as other colonial banks do, because they cannot afford the rates paid by other banks. The proportion of deposits to capital in the earlier stages of growth was so small that branch banking could not have reached its present comparatively perfect development, but for the note issues not being specially secured. It has been argued that if this power was taken away or replaced by a specially secured issue, perhaps one-half of the branches would have to be closed.

The growth of banking in Canada, 1860 being for Old Canada alone.

Year.	Capital paid-up.
1860	$24,400,000, say £4,880,000
1870	32,000,000 ,, 6,400,000
1880	60,500,000 ,, 12,100,000
1890	59,500,000 ,, 11,900,000
1900	65,154,000 ,, 12,030,000
1910	99,676,093 ,, 20,000,000
1912	114,881,914 ,, 23,000,000
1922	125,004,717 ,, 25,000,000

Year.	Note Issues.
1860	$9,700,000, say £1,940,000
1870	14,100,000 ,, 2,820,000
1880	20,100,000 ,, 4,020,000
1890	32,000,000 ,, 6,400,000
1900	46,574,780 ,, 9,315,000
1910	87,694,840 ,, 17,539,000
1922	162,849,251 ,, 32,569,850

Year.	Deposits.
1860	$15,900,000, say £3,180,000
1870	50,700,000 ,, 10,140,000
1880	84,800,000 ,, 16,960,000
1890	136,200,000 ,, 27,240,000
1900	356,394,095 ,, 71,279,000
1910	895,706,276 ,, 179,140,000
1922	1,954,627,839 ,, 390,925,568

The currency of Canada was declared by 34 Vict. c. iv. to be dollars, cents, and mills, similar to that of the United States, and British sovereigns to be legal tender at $4.86⅔. United States gold coins of $5 and over are legal tender. A branch of the Royal Mint is established at Ottawa.

[*Trans. Literary and Historical Society, Quebec*, Stevenson (1874-75, 1875-77).—Statutes, orders in council, gazettes of provinces before confederation. —*Dominion of Canada Gazette*, 1908, acts respecting Banks with current accounts, Banking, Insolvent Banks, Currency, Dominion Notes, Savings Banks (Prov. of Quebec), Post Office.—*Statistical Record, Canada.*—Garland, *Banks, Bankers, and Banking in Canada*, 1890.—Sir E. Walker, *A History of Banking in Canada*, 1909.—Sir E. Walker, *Canadian Banking*, Toronto, 1923.]

B. E. W. ; F. W. G.

BANKS, National (United States of America), were established by an act of 1863, revised 1864, and amended by later legislation. The essential features of the system were the issue of bank notes by local banks under national supervision, the deposit of United States bonds as security for all notes issued, and the limitation of the right of issue to the national banks. The act was adopted, after repeated recommendation by Secretary Chase, as one of the leading financial measures of the civil war of 1861-65, partly as affording a market for the large mass of bonds required by the banks for deposit under this plan, but chiefly as a provision for reforming the paper currency after the return of peace. The direct issue of legal tender notes by the United States treasury, which had begun early in 1862, was regarded as a temporary expedient, and the withdrawal of the notes and restoration of specie payments after the close of the war appeared not improbable. The national banks would then supply a convertible currency, amply secured, of uniform value throughout the Union, and there could be no revival of the vicious systems of issue under local authority from which the country had suffered deeply. It was also an advantage

that in every state the banks of issue, having their capital invested in United States bonds, would find their interests identified with those of the union. Part of these advantages were lost by the delay in returning to specie payments (1879), the final recognition of the legal tender notes as a permanent currency, and the temporary decline of the national bank circulation. The adoption of the system, however, gave the United States a large class of banks in high credit, which have been of the utmost service to them. They carried on business under strict regulations as to making advances, and were required by law to hold a minimum reserve in specie and legal tender notes against deposits to the amount of 25% in the case of city, and 15% in the case of country banks. In case of insolvency, shareholders were liable to an amount equal to the face value of their shares. The banks were required to publish their accounts five times a year, and were under the official inspection of the Comptroller of the Currency who had power to enforce all regulations. Under this system the national banks became the strongest class of banks in the country, and grew rapidly. In 1864 there were 139 banks, with capital $14,000,000 (£2,800,000); in 1922, 8249; capital and surplus, $2,349,319,000 (£577,673,000); total resources, $20,926,099,000 (£4,185,220,000).

In addition to these, the state banks, private banks, and trust and loan companies, under varying degrees of official supervision, grew up. These were 22,140 in 1922, with a total capital of $1,636,734,000 (£327,347,000); surplus, $1,648,603,000 (£329,721,000); and deposits, $23,929,952,000 (£4,985,900,000).

A feeling that the system of national and state banks was inadequate was brought to a head by the crisis of 1907. A searching inquiry resulted in the Federal Reserve Act, 1913, the main points of which are as follows:—The country is divided into not less than eight or more than twelve Federal Reserve Districts, in each of which a Reserve City is chosen; in this a Reserve Bank is established with capital of not less than $4,000,000 (£800,000), subscribed by National and such other banks as choose to be "member" banks. If the amounts subscribed are insufficient, the public may contribute amounts of not more than £5000, the balance to be made up by the government. Reserve Banks may issue notes to "member" banks to such an amount that the Reserve Bank holds a gold reserve of 40% against them. It may exceed this amount for short periods by paying a graduated fine to government and when authorized by the Federal Reserve Board. They may discount any bills enclosed by any of its "member" banks except those drawn to carry on trade in stocks or bonds other than those of the government, to an amount not exceeding in the aggregate half its capital and surplus, and may fix the rates of discount to be charged for each class of paper. They may deal in government bonds, coin, and bullion, and transact all business usual to banks, such as establishing foreign agencies and discounting foreign commercial paper. The banks are controlled by a Federal Reserve Board composed of the Secretary to the Treasury, the Comptroller of the Currency, and five members appointed by the President with the approval of Congress, who are carefully guarded from undue outside influences. Their powers are very wide, and include the right to require any Reserve Banks to rediscount the discounted paper of any other Reserve Banks at rates fixed by itself, to suspend reserve requirements specified in the act for limited periods, to add to the central reserve cities, and to enforce the act generally. It is assisted by a Federal Advisory Council composed of one elected member from each Reserve District. "Member" banks not in a reserve city hold reserves equal to 7% of demand deposits and 3% of time deposits. Banks in reserve cities hold reserves equal to 10% of demand deposits, 3% of time deposits. Banks in central reserve cities hold 13% of demand deposits, 3% of time deposits. These reserves are to be held and maintained in each case with the Federal Reserve bank of the district. Reserve Bank Stock bears 6% cumulative interest, surplus to be divided equally between Reserve and the government, the latter to be applied to redemption of Public Debt or to a government gold reserve; when the reserve exceeds 40% of total paid-up Capital Stock of the Reserve Bank the whole surplus goes to the State.

[For account of United States banking down to the Civil War, see Rept. of Comptroller of Currency, 1876, pp. 6 and 83-123. See also *The A B C of the Federal Reserve System*, E. W. Kemmerer, London, 1919.] C. F. D.; F. W. G.

BANKS, EARLY EUROPEAN. Banks founded in early times in Europe carried on a rather different business than that known now as banking. The BANK OF VENICE is traced by ANDERSON, *Origin of Commerce*, vol. i. p. 156, to the forced loans raised by the republic (1156, 1480, 1510), the transfer of stock and the payment of interest taking place at a public office, which was subsequently made a deposit bank; but Lattes and Ferrara state that, though the stock, by its transfer, became an important medium of exchange, deposit banking in Venice was thoroughly established by private bankers in the 14th century, and the first public bank, the Banco di Rialto, was opened by decree of the senate in 1587, after frequent failures of private banks. In 1619 the Banco del Giro, known as the Bank of Venice, was established (see Lattes, *Liberta delle Banche a Venezia*, p. 183), like its predecessor, without capital, purely as a bank of deposit, under the management of public officers. It received funds for the state and for individuals, making a small charge for holding

private deposits; transfers were made upon the books by the order of depositors; bills of exchange were paid by such transfers; and the tender of payment in bank for any sum not less than 100 ducats could not be refused. It became an important aid to commerce, and was long famous throughout Europe. As it was not properly a lender, the bank should never have had less bullion than the amount of its deposits; but loans to the government compelled it to suspend payment more than once, and with some loss of credit. It kept its accounts in ducats *banco*, which had no corresponding coin, but were credited or redeemed by the bank, as might be required, at an advance of 20 per cent above the ducat *effetivo* of the mint. Whatever the origin of this difference or agio, it seems finally to have represented a mere difference of denomination, as if the Bank of England were now to keep its accounts in guineas, using the current coin in all receipts and payments. The Bank of Venice declined with the republic, and fell, after the invasion by the French, 1797. It is an indication of the financial skill of the managers of this bank that they were able in 1766 to reduce "the interest of their funds to 4 per cent, at the same time offering payment of their principal to those who were unwilling to accept that rate of interest" (Macpherson, *Annals of Commerce*, vol. iii. p. 444). Banking institutions are mentioned by CIBRARIO as having existed in Genoa in the 12th century. The Bank of St. George, which dates from 1407, a bank of circulation and deposit, was the financial centre of the republic, and carried on all the transactions in the public funds of the state. ANDERSON (vol. i. p. 319) says that in 1345 Genoa had "run so considerably into debt to her own citizens that in this year four of them were elected to make provision for those debts, and for the current service of the year," and that in order to pay the interest on the debts of the state the customs were assigned to it. The council of the bank were one hundred, and the governors eight in number, "managing their stock prudently, and having many rich men concerned with them, they afterwards supplied the further necessities of the republic; and, for that end, had at length most of the cities and territories of Genoa pawned, or rather sold to them," . . . and (p. 414) "In proportion as the wants of the republic increased, so did the credit of this house or bank, by having still more bonds, rents, and important dominions assigned to it." The power of the Bank of St. George increased, so that, according to De Mailly, there was "seen in the same city two independent sovereignties." The appropriation of its property by the Austrians, 1740, and by the French in 1800, destroyed its credit, which till then had remained unimpaired. The BANK OF SWEDEN, founded, 1656, by a Swede named Palmstruck, claims to have been the first established on modern principles as a bank which issued notes payable to bearer at sight. The first bank-note was issued 1658. An "enquête" made by the French government in 1729 declares the bank-note to be an admirable Swedish invention, designed to facilitate commerce (Palgrave, *Notes on Banking*, p. 87). This bank became the Riks bank (Bank of Sweden) 1688; it still carries on business in Stockholm, and has always been national property. The BANK OF AMSTERDAM, founded 1609, was established for a different purpose, namely, to provide a common and permanently steady currency in which the foreign bills of exchange domiciled there might be paid, without the loss and inconvenience caused by a fluctuating currency. The establishment of this bank is described by A. SMITH (*Wealth of Nations*, bk. iv. ch. iii.) "Before 1609 the great quantity of clipt and worn foreign coin which the extensive trade of Amsterdam brought from all parts of Europe, reduced the value of its currency about 9 per cent below that of good money fresh from the mint. Such money no sooner appeared than it was melted down or carried away, as it always is in such circumstances. The merchants, with plenty of currency, could not always find a sufficient quantity of good money to pay their bills of exchange; and the value of those bills, in spite of general regulations which were made to prevent it, became in a great measure uncertain. "In order to remedy these inconveniences, a bank was established in 1609 under the guarantee of the city. This bank received both foreign coin and the light and worn coin of the country at its real intrinsic value in the good standard money of the country, deducting only so much as was necessary for defraying the expense of coinage, and the other necessary expense of management. For the value which remained, after this small deduction was made, it gave a credit in its books. This credit was called bank money, which, as it represented money exactly according to the standard of the mint, was always of the same real value, and intrinsically worth more than current money." Payments were made in transfers of "bank money," which were equivalent to cheques. For the last century of its existence the bank adopted the method, also described by Smith, of making advances in bank money upon the pledge of coin or bullion deposited, the owner paying interest for the advance and receiving a *récépissé* to enable him to withdraw the pledged metal upon making repayment. This system, which has been much misunderstood (as by M'Culloch in his edition of the *Wealth of Nations*, p. 215), superseded the earlier practice of simple deposit, but appears to have equally answered the purpose for which the bank existed. The bank of Amsterdam rendered great services to commerce for more than two hundred years, but during the French occupation at the close of

the 18th century it was found that the bank had advanced very large amounts to the provinces of Holland and West Friesland, the Dutch East India Company, and the city of Amsterdam. The bank then became virtually insolvent, but the city finally paid the holders of bank money some time before 1802. Attempts were made to revive the bank, which languished until 1820, when it was at last closed.

The BANK OF HAMBURG was established 1619, for similar reasons to that of Amsterdam. To the prosperity of the trade of Hamburg, the most vigorous offshoot of the once powerful HANSEATIC LEAGUE (*q.v.*), the bank of that city largely contributed. It carried on its business under the protection of the state, and was a place of deposit, or warehouse of the precious metals—principally uncoined silver. Silver in bars was the true foundation of the bank's stock, coined silver, gold, and to a small extent copper were merely received as pledges with a margin. The "mark banco," or money of account, represented the 59½ part of a metrical pound of fine silver. Any quantity of fine silver was received by the bank, and credit given for it at the rate of 59½ mark banco for one pound of fine silver, 1 per mill (⅛ per cent) being charged to the person who sold the silver to the bank. Accounts could only be opened by a Hamburg citizen or corporation. In order to avoid any risk of loss, no silver was received under the fineness of $\frac{998}{1000}$, and every bar had to be assayed by a sworn assayer (*Wardein*) in the service of the bank. In this manner the payments to be made were merely transfers from one account to another by persons who kept an account at the bank. To transact their business they had either to appear personally or to be represented by an attorney. The person who appeared, whether the owner of the account or the attorney, had to hand over the check, which may more properly be described as the order for transfer, with a printed signature personally to the bank. One list for all the separate sums dealt with was handed in. Besides the business based on bar silver, the Hamburg bank also advanced bank money against silver coins, and in a more restricted way on gold, under careful regulations and for a limited time only. These loans, however, could be renewed. The pledge itself could only be taken out by the person who took money for it, or by another one to whom it was formally transferred (Palgrave, *Notes on Banking*, p. 116). The Bank of Hamburg continued to do business on these principles for many years. Modern methods of account, however, were gradually introduced. On 15th February 1873 the old system of a bank currency based on uncoined silver came to an end. The German currency was employed; the development of the Bank of Germany, and an establishment of a branch of that bank in Hamburg, together with the alteration in the currency of Germany from a silver to a gold basis, rendered the continuance of the Bank of Hamburg no longer necessary, and its business was merged in that of the Bank of Germany. The bank had accumulated a capital of about 1,000,000 marks, or £50,000 besides the value of its buildings. The latest reference to its separate existence is found in the transactions of the senate of Hamburg of the 13th October 1875. In these, following the ancient practice of the free city, the senate formally communicates to the burghers its resolution to sell the buildings of the "venerable institution which had performed such great services to German trade" to the Bank of Germany for 900,000 marks (£45,000). The actual transfer took place on 1st January 1876. An agreement was likewise made that the officers and staff of the bank should be transferred on a similar footing to that which they had previously held to the Bank of Germany—seven being retained while five were pensioned by the State, including the two *Wardeine* (assay officers); and thus the bank which had carried on business to a later date than any other of the banks, established on what may be termed mediæval principles in Europe, closed its honourable and useful career. Dr. A. SOETBEER published (*Volkwirthschaftliche Vierteljahrschrift*, 1866-1867), a very interesting account of the Bank of Hamburg (*Die Hamburger Bank*, 1619-1866), which narrates its remarkable history. The soundness of the course of business followed, at all events from 1770 onwards, was exemplified in the strongest manner on the 5th November 1813. When on this date the French took possession of the bank treasure, 7,506,956 mark 6 schilling in silver, the corresponding liabilities were found to be 7,489,343 mark 12½ schill. only. So unbroken was the confidence in the institution that its operations were hardly interrupted even by this shock; the removal of the treasure by the French continued till 18th April 1814. After a further period of disturbance the freedom of Hamburg was re-established 1st June 1814. The bank immediately resumed business and the value of the mark banco stood as before. The tardy reparation in the form of an inscription of French rente of 500,000 fr. (equal to 7 fr. rente for every 100 mark banco taken away), was not made till 1816.

This, though the most severe ordeal the Bank of Hamburg had to pass through, has not been by any means the only one. There was a severe crisis in 1763, another in 1799, caused by violent fluctuations in prices, another in 1857, arising out of speculative business, the last-named being only allayed by a loan from Vienna, first of ten million mark, then of five million more in current silver (say £1,125,000). As not unfrequently occurs in panics, the knowledge that the means to meet liabilities were at

hand sufficed to calm the crisis, the identical coins being, as Soetbeer informs us, returned to the national bank at Vienna in the selfsame boxes in which they had been despatched. This loan was guaranteed by the senate of Hamburg. The amount of indebtedness liquidated was very large, the total being 144,586,000 mark banco—(say £10,844,000 reckoning the mark banco at 1s. 6d.) This amount is made up by the commercial failures *m.b.* 98 millions (say £7,350,000), the sum, collectively *m.b.* 21 millions (say £1,575,000), dealt with by the three Committees to which the State delegated authority to grant loans on bills, merchandise, and other securities, (1) the *Belehnungs Kommission*, *m.b.* 8,153,000 (say £611,475), (2) the *Staats Disconts Casse*, *m.b.* 3,029,549 (say £227,215); (3) the *Vertrauens Commission* for the first Austrian loan, *m.b.* 10,000,000 (£750,000); and the portfolios of the two joint-stock banks (*Aktien Banken*), *m.b.* 25 millions (£1,875,000). The loss which resulted to the state was comparatively small, being about 187,000 mark banco (say £14,025), and to the two joint-stock banks 200,000 mark banco (say £15,000). That on the 98 millions was unknown although no doubt this figure included some of the engagements represented by the portfolios of the banks. The interposition of the state alone prevented a terrible catastrophe.

Nothing could be more sound than the business of such a bank as that of Hamburg, which consists under ordinary circumstances only in transferring "value" from one holder to another. The experience of the bank shows that when severe pressure comes on, as in the crisis of 1857, the support of the government may enable these limits to be safely exceeded for a time, with great advantage to the community. Dr. Soetbeer supplies statements which show the rapidity and the fluctuations in the operations of the bank. The amount held by the bank was turned over during each year from 1856 to 1866 as follows:

Year.	No. of Times.	Average rate of discount per cent.
1856	115	$6\frac{1}{4}$
1857	136	$6\frac{1}{2}$
1858	88	$1\frac{3}{4}$
1859	59	2
1860	68	$1\frac{3}{4}$
1861	88	$2\frac{9}{16}$
1862	111	3
1863	111	$3\frac{3}{16}$
1864	135	$4\frac{3}{16}$
1865	118	$3\frac{9}{16}$
1866	119	$4\frac{1}{16}$

The relation shown between rapidity of turnover and rate of interest is very remarkable. The fact that this is the case has been noticed by men of business, who would hardly have expected so exact a statistical confirmation of their individual observations.

Similar in many ways to the Bank of Hamburg was the Bank of Rotterdam (est. 1635); one difference appears to have been that accounts were allowed to be kept, either in "bank money" to meet bills drawn foreign on Rotterdam, or in "current money" to meet bills drawn in Rotterdam on foreign countries. Anderson (*Annals of Commerce*, vol. iii. p. 384) mentions another point, namely, that "bills of exchange are paid in large money, and only 10 per cent in schellings." The Bank of Middelburg (est. 1616) appears to have practised lending upon securities (Mees, *Bankwezen in Nederland*, p. 231), and so far to have departed from the usual type of deposit bank. With this exception the scope of the business of all these banks appears to have been much the same, the management, where necessary, as at Venice and Genoa, of the debts of the state, and, further, providing facilities for foreign commerce. Assistance to local industry in the way of discounts and making advances does not appear, at first, to have been, at all events prominently, their original occupation and intention.

BANKS, Land. There are two species of advances which an agriculturist who owns the land he cultivates may require: (1) to increase the working capital needed to carry on cultivation, as wages, purchase of stock, seed, or manures; (2) for permanent improvements in his property, as drainage, irrigation, or farm buildings. The return for the first should take place within one, or, at most, a very few years; for the second it will be fully realised only after a long period. A remarkable development in banking institutions to give assistance of this kind has taken place of recent years. Land Credit Associations are now working in most countries of Europe, in the British Colonies, North and South America, Japan, etc. The record of the work of these societies is *The Monthly Bulletin of Economic and Social Intelligence* issued by the International Institute of Agriculture, published in Rome at the office of the Institute. See also H. W. Wolff, *Co-operative Banking*, 1907; *Co-operative Credit Hand-book* 1909; *People's Banks*, 1919; *Banker's Magazine* (London), Jan. 1909 Oct. and Dec. 1910.

Germany. Distinct institutions have long existed in Germany to meet the demands for these two species of advances.

The first kind are supplied, in the case of large proprietors, by ordinary banks. For small proprietors there are in Germany, besides ordinary banks, institutions on the basis of mutual assurance. Such are the Raiffeisen loan fund societies, particularly for small landowners in rural districts, to protect them from the exactions of the local usurers. These render effectual aid to the cultivators, lending somewhat larger amounts for long periods. They have

had marked success in the Rhine-province of Prussia, Westphalia, and Hesse-Darmstadt.

For permanent agricultural improvements large sums become necessary, and loans can only be repaid gradually during an extended term. Germany was the first country in which special systems of credit for long periods on the security of landed property were organised. The oldest institution of this kind originated in Silesia in 1769, after the seven years' war, under the auspices of Frederick the Great, who gave it a subvention from the state of 300,000 thalers at 2 per cent. The plan was due to a Berlin merchant named Büring. The object was to relieve proprietors who were overwhelmed with debt, having suffered severely from the war, from the high rate of interest and the low prices of agricultural produce. Similar establishments, known as *Landschaftliche Credit-vereine* or *Landschaften*, were afterwards founded in the other provinces of the Prussian monarchy, in Würtemberg, Mecklenburg, Saxony, and most of the other German states, and continue to increase in numbers. They are voluntary associations of landowners, resting on the principle of joint responsibility. Any proprietor who borrows from an association becomes a member of it. The security for the advances they make to their members is the movable property of the borrower, his land and buildings. The position of the association is usually that of first mortgagees. The associations carry on their transactions within limited areas; and this enables them to adapt their operations to the wants of the district, and, in particular, secures that the valuation of lands pledged for advances shall be made by persons thoroughly acquainted with local conditions and possessing the confidence of the agricultural community. They lend at about 4 per cent, *plus* a small contribution ($\frac{1}{8}$ to $\frac{1}{4}$ per cent) towards expenses of management; besides the annual payment applied to the extinction of the loan.

The associations in general do not pay the loan in money, but issue obligations (*Pfandbriefe*) for the amount advanced. These are negotiable, and pass from hand to hand, bringing the holder an interest paid by the association of 3 or 4 per cent yearly. Payment of the principal of obligations cannot, in general, be claimed by the holder, but the association may agree to accept offers of them, and can call them in, usually by drawings, on giving due notice by advertisement. Not merely the property specially represented by the *Pfandbrief*, but all the funds of the association are liable for the regular payment of the interest. Each of the coupons into which an obligation is subdivided usually represents a very moderate amount, and is used as a medium of exchange in small transactions. They have maintained their value extremely well in comparison with other debentures. Thus, for example during the shock to commercial confidence caused by the revolutions of 1848, whilst the $3\frac{1}{2}$ per cent Prussian public funds were quoted at 69, and the shares of the bank of Prussia at 63 per cent, the $3\frac{1}{2}$ per cent *Pfandbriefe* stood, in Silesia and Pomerania at 93, in west Prussia at 88, and in east Prussia at 96; and they have maintained their price well since. In some cases these obligations are issued direct to the borrowers, who themselves undertake their negotiation. In others the association charges itself with the negotiation and gives cash to the borrower, this being furnished by capitalists who invest in the obligations. No dividends are earned by the association. The receipts from the borrowers provide for interest on the obligations, maintenance of a reserve fund, gradual redemption of the obligations, and cost of management. In case the borrower fails to pay the interest on his loan, the association can first seize his produce and other movable effects, and if these are insufficient, can have a receiver appointed over the mortgaged estate, or can sell it by public auction. The debtor can, in general, pay off the debt at will, in full or by instalments of not less than a certain fixed amount.

The governments of the several German states commonly prescribe the conditions (*Normativbedingungen*) under which these societies can be formed, and the rules to which they must conform. The minister of the interior exercises a superintendence over their proceedings, usually through a commissioner who presides at their meetings, and frequently some of the directors are nominated, or their nomination is required to be approved, by the state.

Three conditions appear necessary for the safe and efficient working of such institutions. (1) Public compulsory registration of titles to, and charges on, land, so as to make the existing liabilities of an estate easy to ascertain;—(2) ready and cheap legal methods for recovery of debts and sale of the borrower's property pledged for a loan;—(3) the obligations must be capable of easy and inexpensive transfer.—All these conditions are satisfied in the countries where such establishments have been successful. Further, there must be due care in the management of the institutions, especially in valuation of mortgaged lands. When the *Landschaften* are under state control, it is usually provided by law that the loan shall be made only on first mortgage and to an amount not exceeding half, or at most two-thirds, of the value of the land. When application is made for a loan, if a previous mortgage on the land is found to exist, it is first, with the consent of the prior mortgager, paid off in obligations.

These institutions offer great advantages both to borrowers and lenders. To an agriculturist who has sunk borrowed capital in improvements, the liability to a sudden demand for repayment of the loan is serious; and that step may be

rendered unavoidable by the condition of the creditor's affairs. To the capitalist who lends, a more punctual payment of interest is assured by the responsibility of the association than can always be expected of a private debtor. And he is saved the trouble of examining into the security of the borrower, all risk on that head being borne by the association.

All testimonies on the subject show that these institutions have been socially beneficial. They have lightened the burdens of proprietors, have increased the market value of land, and have determined a more liberal expenditure on permanent agricultural improvements, thus tending to diminish the immigration from the country districts into the large towns. They have also opposed a useful counterpoise to the tendency towards excessive subdivision.

So far we have dealt only with institutions which may be described as *associations of borrowers*, who procure loans for themselves on the security of the whole or a part of their landed possessions, guaranteeing repayment of the loans by their collective responsibility. This was the type of the early German *Vereine*, and new societies have been founded on the same plan. But, besides these, other institutions have come into existence since 1840 in Germany, as well as elsewhere, which may be distinguished as *associations of lenders*, for the purpose of making advances for long terms on the security of immovable property, land, houses, factories or workshops, woods, mines, etc. They have been created by capitalists as modes of investment. The establishments of this kind are more properly than the former called land-banks; they are known in Germany as *Hypotheken-Banken*. They possess a subscribed capital, and pay dividends to their shareholders. The bank is responsible, to the extent of its entire resources, to the capitalist who purchases its obligations. The subscribed capital bears but a small proportion to the amount of the obligations in circulation, so that the security to the holders of the latter rests essentially on the value of the mortgaged properties. The annuity paid by the borrower consists, as in the case of the *Landschaften*, (1) of the interest on the loan, with (2) a commission, and (3) the sum required for the extinction of the debt in the fixed term. The profit of the bank depends on the difference between the interest it pays to holders of its obligations and that it receives from its debtors. The issue of the *Pfandbriefe* of these banks is, in general, limited by legislation, or by direct action of the public authorities; the accounts of the banks are, in some states, required to be periodically submitted to the government.

A special stimulus to the formation of land-banks in Germany, as elsewhere, was supplied by the success of the French CREDIT FONCIER (*q.v.*), founded 1852, which, after surmounting considerable difficulties, obtained a position of stable credit, and extended its operations over the whole of France. Foreign financiers studied with care an organisation which had yielded such satisfactory results; and a powerful impulse was given to the creation of land-banks in the other continental countries. In Germany, in particular, a great number of them were founded; five at Berlin between 1864-72, three at Frankfort-on-the-Main between 1862-71, three at Munich between 1869-71, and many in other parts of the empire. In 1883 there were twenty-four *Hypotheken-Banken* in the German empire, with circulation of over 1700 millions of marks (£85,000,000) in *Pfandbriefe*, share capital of over 250 millions of marks (£12,500,000), and holding over 1800 millions of marks (£90,000,000) in mortgage.

Whilst the *Landschaften* were instituted and worked for the benefit of agricultural proprietors exclusively, it is said that the business of the *Hypotheken-Banken* has been principally in connection with town buildings.

Besides the voluntary associations of which we have spoken, the governments of some of the German states have from time to time founded land-banks, entirely under their own management, for special objects. Thus in the parts of the country where feudal institutions continued longest in force, as for example in Hesse-Cassel and Hanover, they had been created (in 1832 and 1840 respectively) to furnish the proprietors of the "peasant lands" with the means of redeeming the seigniorial dues to which they were subject. In recent times *Landescultur-Rentenbanken* have been founded by the governments of Saxony and Prussia, to assist landowners in draining and irrigating their estates.

[A list of books on land credit will be found in C. Knies's *Geld und Credit*, 2te Abtheilung (1879), p. 395.—Theod. Frhr von der Goltz, *Landwirthschaft*, Theil 1, §§ 47, 48, in Schönberg's *Handbuch der Politischen Oekonomie* (2d ed. 1886).—J. B. Josseau, *Traité du crédit foncier* (3d ed. 1885).—Titre vii., ch. 2, *Institutions de crédit foncier dans les divers états Européens*.—M. Tcherkinsky, *The Landschaften and their Mortgage Credit Operations in Germany* (1770-1920), Rome, 1922.]

J. K. I.

The *Landschaften* have made great progress. In 1920 there were *Landschaften* in Prussia with mortgage bonds in circulation amounting to 913,802,045 marks; in Silesia 723,834,165 marks; in Saxony 389,940,825 marks; in Pomerania 357,048,900 marks; in the estates of Kurmark and Neumark 207,636,020 marks; in Schleswig-Holstein 186,713,950 marks; in Brandenburg 135,681,100 marks; in Westphalia 108,766,300 marks; and in Luneburg, Calenberg-Gottingen-Hildesheim, Bremen, Lower Lausitz, Mecklenburg, Wurttemberg, and Brunswick together 221,788,933 marks.

The size of the peasant holdings on which these loans are granted varies from under 2½

acres to over 250, the largest number concerned being between 2½ and 25 acres. The loans vary from under £100 to over £5000, the most usual size being between £150 and £400. The rate of interest varies from 3 to 4 per cent. Advances are also made on the security of rural holdings by the Savings Banks,—in 1912 they invested £123,200,000 or 19% of their total capital in this way,—and by the 38 Mortgage Banks (*Hypotheken-Banken*) which granted £37,586,000 mortgages on rural holdings out of a total of £564,335,100. See *Deutscher Ökonomist* (Sept. 1913); *Monthly Bulletin of Economic and Social Intelligence*, esp. Sept. 1910, Nov. 1912, and Feb. 1914. R. H. I. P.

BANKS, POPULAR (GERMANY). Banks on a co-operative principle have been established in several countries in Europe, the most prominent examples being in Germany and Italy. The popular banks of Germany, which owe their initiative to the efforts of SCHULZE-DELITZSCH, commenced operations in 1858-59 on strictly co-operative principles. No advance can be made to any one except to a member. Each bank is directed by an administrative council consisting of nine members, elected at the general meeting; a committee is also elected to manage the detail. No one is admitted as a member unless he is accepted by the administrative council; members pay an entrance fee, and subscribe a certain share of the capital, no one being allowed to exceed a fixed limit. Payments may be either by monthly instalments or in one sum. Members have the right, as soon as elected, to ask for a loan, the shortest period for advances being a fortnight, the longest three months. This may be renewed, but not for more than nine months. Each member is required, before a loan can be granted him, to have 60 per cent at least of the amount paid in to his credit, or to be guaranteed by another member of the society. The banks receive amounts on deposit, on which interest averaging about 4¼ per cent is paid; for these sums both the capital and the members individually are liable. The dividends to the shareholders average from 5 to 7 per cent. The advances are at about 8 per cent, but part of this is returned to the borrower by way of dividend.

The troubles which the revolution of 1848 brought on Germany led Schulze-Delitzsch to devote his attention to this great work. He perceived, with the intuition of a statesman and first-rate financier, that state aid and charity would never help those who sought assistance of that kind to emerge from the grinding poverty, the lot of too many, not only of the working-classes, but of the small traders. Believing that "man has implanted in his nature, together with the wants which are bound up with his existence, the powers, the right use of which leads to the satisfaction of those wants," he steadily persevered in his efforts to apply the principle of "self-help" to a business usually supposed to require a large fund of capital before it can be set satisfactorily to work. The rate of interest to the poor but hardworking borrower was reduced from a most usurious rate (60 and even 730 per cent are mentioned as rates which had been given previously), while what the lender received made the effort of saving worth while.

These banks take, to a certain extent, the place of savings banks, and are of great service in promoting the prosperity of the districts in which they work. Besides the popular banks (*Vorschussvereine*), Schulze-Delitzsch established industrial syndicates (*Genossenschaften in einzelnen Gewerbszweigen*); co-operative societies for articles of consumption (*Konsumvereine*); building societies (*Baugenossenschaften*).

There were 3481 societies in 1881, *i.e.* 1889 popular banks, 898 industrial syndicates, 660 co-operative societies, 34 building societies with a capital of £30,500,000 (£9,500,000 being payments of members and reserves, and £21,000,000 borrowed capital). In 1859, 80 popular banks reported 18,676 members, £6,100,000 advances made, and £41,000 funds, capitals, and reserves. In 1887, 886 banks reported 456,276 members, £80,000,000 advances, and £6,744,000 funds, capitals, and reserves. The Schulze-Delitzsch banks were centralised in 1864 under the German Co-operative Societies Bank, which amalgamated with the Dresdner Bank in 1903. There were 15,000 local banks in 1913, membership 1,500,000, loans about £100,000,000. There are 5000 banks in the Raiffeisen Federation, principally in villages of under 2000 inhabitants.

[See Paper on "People's Banks," by A. Egmont Hake, *Journal of the Institute of Bankers*, June 1889; who remarks on the opposition the system received at first from the police—an opposition which, if persevered in, must have caused the whole movement, so useful to the country, to collapse. —*Vorschuss-und-Credit-Vereine als Volksbanken Praktische Anweisung zu deren Einrichtung und Gründung von Schulze-Delitzsch*, Leipzig, 5th ed., 1876. This volume contains complete information on the method of establishing the system, duties of directors, officials, arrangements for general meetings, amount of shares, etc., the act of 1868, with forms of account, etc. The pains taken with the detail are worthy of praise.

For history of these institutions, 1890-1910, in Germany see C. R. Fay, *Co-operation at Home and Abroad*, London, 1908, and List of Authorities therein; H. W. Wolff, *People's Banks*, London, 1919; *Statistisches Handbuch für das Deutsche Reich.*—D. S. Tucker, *Evolution of People's Banks*, New York, 1922.]

BANKS, POPULAR (ITALY). Co-operative banking was introduced into Italy by Signor Luigi Luzzatti, Minister of the Italian Treasury, and "Presidente dell' Associazione fra le Banche Popolari Italiane," who, in 1864, adapted the organisation employed by SCHULZE-DELITZSCH

for the use of his own country. The leading principles of the Italian popular banks, as of those of Germany, are co-operation, mutual responsibility, and self-help. The system has spread over nearly the whole of Italy. By 1887 there were 608 popular banks. The method of organisation is, in the main, similar to that employed in Germany. The management rests on the intelligence of the shareholders, working through different committees which undertake separate portions of the administration. The officers—president and committee—are unpaid. To prevent undue power from being accumulated in the hands of any individual, the number of shares any single person may hold is limited ; and at the general meetings of the society, no shareholder has more than one vote, whatever the number of his shares may be. The advantages obtainable from joining these institutions are greatly appreciated by the smaller shopkeepers and traders, who form the largest class among the shareholders ; next in number are the small agricultural proprietors and farmers, working men proper being about 10 per cent of the whole. The transactions appear to be extremely minute, loans even of 1 franc (10d.) not being unknown ; the largest number of loans being for sums less than 20 frs. (16s. 8d.). The deposits correspond, the largest number being below 50 frs. (£2). Before these banks had been introduced a most usurious rate had been charged for small advances to petty traders and artisans, 30 to even 60 per cent being paid, and even higher rates. The local business done in these small advances appears to have been generally sound. Luzzatti quotes, with a very justifiable satisfaction, the following figures of the popular banks of Italy in his official publication of 1889. The amount of loans and discounts in 1880 was £16,895,236, of which only ·28 per cent was overdue and unpaid. In 1886 those overdue and unpaid were ·22 per cent of the total £45,902,837. In 1883, 250 popular banks reported capital £2,566,880, deposits £10,421,200 ; in 1902, 696 out of 736 banks reported capital £3,305,068, deposits £19,261,240. The rural banks in 1902 numbered 1099. In Jan. 1911 there were 862 co-operative credit societies and popular banks, 1140 rural banks, 207 ordinary credit companies, and 5 agrarian credit institutions and 7 *crédit foncier* companies. The land certificates amounted to £26,988,905 and the loans to £24,296,367. In 1912 the 7 *crédit foncier* companies granted about 1760 loans on mortgage (for rural and urban land) for an amount of about £3,235,000. In 1913 the 2094 rural co-operative banks had a capital of about £120,000, deposits nearly £4,000,000, amount of loans passed about £10,000,000. In 1913, on the suggestion of Signor Luzzatti, a Federation of Co-operative Credit Institutions of North Italy was formed with the view of making them more useful and to protect their interests. The Federal Bank of the Co-operative Credit Societies was also formed to act as a central bank for the Federation. This new organisation will give a great impulse to the work of the people's banks. Rural banks in other parts of Italy are being associated in the same way.

The practicability of the system turns on the fact that the management is local, and the characters of borrowers or shareholders concerned well known, and "as each shareholder mutually guarantees his fellow, every one has an interest in preventing the bank from being defrauded" (*Quarterly Review*, Jan. 1887, p. 154).

[*Il credito Popolare in Italia, Relazione* di Luigi Luzzatti, Rome, 1882.—*Manuale per le Banche Popolari Co-operative Italiane*, E. Levi, Milan, 1883. —*Statute della Banca Mutua Popolare di Firenze ; Società Anonima Co-operativa*, Firenze, 1883.—*Introduzione alla Statistica delle Banche Popolari* (1887), *Con una Relazione*, di Luigi Luzzatti, Rome, 1889.—*Italia Bancaria*, Milan, 1908. See Bibliography to art. BANKS, LAND, esp. *Monthly Bulletin* (*loc. cit.*), Jan. and Feb. 1914.]

BANKS, SAVINGS. Probably the earliest instance of a savings bank in England was the Charitable Bank at Tottenham, founded by Miss Priscilla Wakefield in 1804. Six gentlemen acted as trustees, and undertook to receive the moneys deposited, allowing 5 per cent interest on all sums of twenty shillings in their hands for one year. This involved loss to the trustees. In 1808 a similar society, opened at Bath for domestic servants, allowed 4 per cent. The Parish Bank Friendly Society of Ruthwell, 1810, was a genuine savings bank efficiently organised. Its success being considerable, it had many imitators. Six years later there were nearly eighty savings banks in England and Ireland, and in 1817 legislation was resorted to. Acts 57 Geo. III. c. 105 and c. 130 encouraged and regulated banks for savings in England and Ireland. Trustees were prohibited from making any profit out of these banks. At the same time they were bound to remit all deposits when they exceeded £50 in the aggregate to the office for the reduction of the national debt, where "the fund for the banks of savings" was opened, and interest was allowed by that office of 3d. per cent per diem, or £4 : 11 : 3 per cent per annum, whereas the banks themselves mostly allowed their depositors 4 per cent. The amount deposited in any one year was restricted to £50, though in England a depositor was permitted to deposit £100 in the first year. In 1824 another act was passed limiting deposits to £50 in the first year and to £30 in any subsequent year, and when the deposits of any person exceeded £200 no interest was allowed on the excess. In 1828 an act was passed to consolidate and amend the laws relating to savings banks, and this provided that the rules and regulations of each such bank

should be approved by the commissioners for the reduction of the national debt; that the interest allowed by that office should be only 2½d. per cent per diem (£3 : 16 : 0½ per cent per annum); that only 2¼d. should be allowed by such banks to depositors (say £3 : 8 : 5¼ per cent per annum); and that no depositor should be permitted to deposit more than £150, although the interest might be permitted to accumulate until the deposit reached £200. There were (20th November 1833) amongst 385 savings banks, 414,014 depositors in England, their total deposits being £13,973,243; in Wales there were 23 banks, 11,269 depositors, and £361,150 deposits; and in Ireland 76 banks, 49,872 depositors, and £1,380,718 deposits; making in all 484 banks, 475,155 depositors, and £15,715,111 deposits. A further act was passed in 1833 (3 Will. IV. c. 14).

In 1835 Act 5 & 6 Will. IV. c. 57 was passed, extending the provisions of these acts to Scotland, and military or regimental savings banks were established in 1843. In 1844 another act was passed (7 & 8 Vict. c. 83), reducing the interest allowed by the national debt commissioners to 3¼ per cent, and the maximum interest to depositors to £3 : 0 : 10 per cent. The recent reduction in the rate of interest paid on consols must lead to further modifications in this. Arrangements were also made for the summary distribution of deposits of deceased persons, and other regulations were made in regard to the purchase of annuities, etc. On 20th November 1844 there were 577 savings banks in the United Kingdom, their deposits being £29,504,861 by 1,012,047 persons, averaging £29 per head. It may be gathered from the successive reductions in the rate of interest allowed by the commissioners that the government had not found the custody of the savings banks' funds directly profitable. In fact, as they had to invest the money in consols and other home government stocks, there was found to be an accumulated loss of some millions. Various partial provisions were from time to time made to cover this; so late, however, as 1881 there was a deficiency of £2,144,562, which was finally extinguished by the creation of an annuity of £83,673, expiring in 1908. In the year previous (1880) the interest allowed by the commissioners was lowered from 3¼ to 3 per cent, at which it now remains, while the interest to depositors is mostly 2½ per cent per annum.

But in 1861 a great development of the savings banks principle was effected. Post office savings banks (promoted greatly by the efforts of the late Sir C. W. Sikes of Huddersfield) were established by Act 24 Vict. c. 18, and at once became popular in England and Ireland. The post office savings banks, however, have been less progressive in Scotland, where, though the trustee banks were of later creation, they have taken a firm hold. The rate of interest provided under this act was 2½ per cent.

It is evident that since the establishment of the post office savings banks throughout the kingdom the security they can offer has greatly influenced depositors, especially as the advantage to be gained in a higher rate of interest by depositing in the trustee savings banks is but small. The following figures will show the growth of these deposits :—

Savings Banks.		United Kingdom.
1833—Trustees		£15,715,111
1844 ,,		29,504,861
1860 ,,		41,258,362
1870	Trustees	37,958,549
	Post Office	15,099,104
1880	Trustees	43,976,447
	Post Office	33,744,637
1890	Trustees	43,650,000
	Post Office	67,634,000
1900	Trustees	50,622,000
	Post Office	131,916,000
1910	Trustees	51,563,000
	Post Office	164,092,000
1921	Trustees	73,084,000
	Post Office	264,157,000

The purchase of government stock through the post office dates from 22nd November 1880.

In addition, the English joint stock banks announce their willingness to receive small deposits and open special savings bank accounts. The amount of these deposits is, however, comparatively small and the bulk of such business remains with the savings banks mentioned above.

In British colonies the savings banks have also become a considerable power both in the form of general and post office banks. In Australia in 1922 over 60 per cent of the population were depositors, their deposits, aggregating £163,500,000, reaching £46 : 16 : 6 per head. In Canada, on 30th June 1888 the deposits in the savings banks of the dominion reached $41,371,058 (say £8,481,066). The total amount, 1920, in all the savings banks was $40,163,000 (£8,000,000), $4·44 per head of population.

In many foreign countries also savings banks are well established, and large sums are deposited in them. In France the Caisse des Dépôts et Consignations is stated, in the *Nouveau Dictionnaire d'Économie Politique*, p. 924, article Caisses d'Épargne, to have received in fifty years (1837-1887) about £224,000,000 from the Caisses d'Épargne, to have repaid £96,000,000, and to have invested about £20,500,000 in the purchase of government *Rente*. The *Caisse Nationale d'Épargne*, established 1881, is stated to have collected in eight years about £13,000,000 belonging to more than 1,272,000 depositors. By 1908 this had become £61,000,000 with 5,291,000 depositors. The French Savings Banks (*Report of American Comptroller of the Currency*), to give another example of thrift in France, held nearly £100,000,000 in 1920. F. W. G.

BANK NOTE. Regulations in different

COUNTRIES. The arrangements respecting bank note circulation are very different in different countries.

(1) In the United Kingdom the note circulation is regulated by the Bank Acts of 1844-45. Sir R. PEEL, in conformity "with the principles of the currency theory" (see Tooke's *History of Prices*, vol. iv. pp. 373, 374), stated, in his speech in the House of Commons, 24th June 1844, that one of the objects he had in view was "that the paper circulation should conform itself to gold, that it should fluctuate like gold." To attain this the accounts of the Bank of England were henceforth to be divided into two parts, issue and banking departments.

The method adopted is shown in the return which follows:—

BANK OF ENGLAND.

An account pursuant to the Act 7 and 8 Vict. c. 32, for the week ending on Wednesday, the 30th January 1924.

Issue Department.

Notes issued	£146,004,435	Government Debt . .	£11,015,100
		Other Securities . .	8,784,900
		Gold Coin and Bullion .	126,254,435
		Silver Bullion . .	
	£146,004,435		£146,004,435

Banking Department.

Proprietors' Capital .	£14,553,000	Government Securities .	£48,422,032
Rest . .	3,454,022	Other Securities	69,832,736
Public Deposits[1]	16,248,295	Notes . .	19,470,810
Other Deposits	105,289,535	Gold and Silver Coin . .	1,824,562
Seven-day and other Bills .	5,288		
	£139,550,140		£139,550,140

January 31, 1924. E. M. HARVEY, *Chief Cashier.*

The banking department of the Bank of England, though as entirely separated from the note circulation as if it were under different management, yet is most intimately connected with it in one sense, for the amount of notes held in the banking department represents the available reserve of gold. The Issue Department is concerned with the note issue, which after 1844 was separated from the other business of the Bank, and rigidly controlled so far as the amount of notes allowed to be issued is limited by the influx and outflow of bullion. The Bank of England, while allowed to issue part of its note circulation against securities, either government or of an analogous description of a fixed character (£14,000,000, 1844; £19,750,000, 1923), was compelled to hold bullion, a fourth of the whole permissibly in silver, against the remainder. The circulation of notes was thus automatically linked to the supply of bullion, and as the Bank has ceased to hold silver bullion since 1853, to the supply of gold bullion brought to it. "The action of the public (said Sir R. Peel, 6th May 1844) will regulate the amount of that portion of the note circulation which is issued upon bullion." This arrangement has since been carried out. The limit to the note circulation of the Bank of England is thus the amount of bullion it may hold. Four times since 1844—in 1847, 1857, 1866, and 1914—circumstances have compelled a relaxation of the Bank Act, but in 1847 and in 1866 the note circulation did not exceed the ordinary legal limit allowed. In 1857 an addition of £2,000,000 was made to the "other securities" held in the issue Department by authority of a letter addressed by the First Lord of the Treasury (Lord Palmerston) and the Chancellor of the Exchequer (Sir G. C. LEWIS) to the Governors of the Bank, dated 12th November 1857. Under the relaxation of the act thus permitted, the note circulation exceeded the statutory limit by £928,000 on the 20th November 1857 (*Proceedings of the Select Committee on the Bank Acts*, House of Commons, 1858, p. xli). In 1847 and 1866, though permission was given, the letter of the act was not actually infringed. To continue the history of the act of 1844: the existing issuing banks in England and Wales were allowed to continue their issues, under conditions which have resulted in the gradual extinction of their note circulations, no security whatever being required to be held against their issues. To the note-issuing banks in Scotland and Ireland more favourable terms were allowed, but under condition that for every £1 in paper issued beyond the limit fixed by the acts of 1845, £1 in gold should be held, not as security, but as representing the addition to the currency circulating in the country.

(2) In France an entirely different system prevailed until 1914. A limit was fixed to the note circulation of the Bank of France (£96,000,000, raised to £112,000,000, 1871; to £128,000,000, 1872; to £232,000,000, 1909. The bullion held was very large in amount, *e.g.*, 2nd Jan. 1914, £140,307,000 gold, £25,543,000 silver; the average note circulation (1913), £226,600,000. At the outbreak of war in 1914 the Bank was permitted to increase its note circulation, and a large expansion has since taken place.

(3) In Germany a modification, with very essential differences, of Peel's act is in force. The German Bank Act of 1875 allows an amount of issue against securities (1875, £12,500,000; 1909, £27,500,000 and £37,500,000 at the end of each quarter). Against the remainder, cash is held, thus: "current German coin, Reichskassenscheine (legal tender notes of the empire), notes of other German banks, and gold bars and foreign gold coin calculated at the rate of 1392 marks (£69 : 12s.) for a pound weight (German) of gold." The Imperial Bank must "have in its coffers at least one-third of the

[1] Including Exchequer, Savings Banks, Commissioners of National Debt, and Dividend Accounts.

amount of notes in circulation, in German currency, as defined above. "The rest of the amount of notes in circulation must be represented by discounted bills, due at latest in three months, and for which generally three, but *at least* two persons known to be solvent are responsible." Should the note issue exceed the limits assigned, a tax of 5 per cent on the excess issue is charged (see "The German Bank Act of 1875," R. H. Inglis Palgrave, *Journal of the Institute of Bankers*, vol. vii. 1886). The note circulation exceeded the statutory limit on 19 occasions in the year 1913.

(4) In the United States the note circulation of the national banks, which provides a large part of the circulating medium of the country, is arranged on different principles from those existing in any of the countries previously mentioned. By way of comparison with the arrangements respecting bank note circulation in other countries it is sufficient to state here that bonds of the United States are required to be deposited against the note circulation which was not originally allowed to exceed 90 per cent of the full value of the bonds, but was permitted up to the amount of the capital stock of the banks. The proportion to the bonds was afterwards diminished to 80 per cent, raised to 90 per cent 1898 and to par value of the bonds March 14, 1900. The redemption of all the notes presented at the place of business of the bank is required by law during business hours, in "lawful money of the United States," towards which a reserve of 5 per cent in lawful money on the extent of the note circulation is required to be constantly kept on deposit with the treasurer of the United States. The safeguards provided (1) by the government bonds being 10 per cent in excess of the circulation (par in 1900, see above);—(2) that the circulation is limited to 90 per cent of the paid-up capital;—(3) that a reserve of 5 per cent on the circulation in lawful money should always be forthcoming,—furnished the United States with a system of note circulation which for many years after the establishment of the national banks "was its most important feature:" (Report of the Comptroller of the Currency, 1888). Its decrease was partly attributable to the heavy taxation imposed on it, partly to the diminishing return obtainable from the bonds on which it was founded, partly also to the movement of business extend. (See also BANK NOTE, United States of America.)

(5) In Sweden, until the issue of notes was centralised in the Riksbank in 1897, the Enskilda (unlimited liability) Banks issued their own notes on a system which, while permitting the use of securities as in Germany, provided for their redemption in an effectual manner.

The instances given are examples of the different methods on which circulation may be based. In the case of the Bank of England it is assumed that a certain proportion of the total issue cannot be presented for payment in specie; fixed securities are held against that part, while bullion has to be held against the remainder. The two departments, note circulation and banking, are entirely separate from each other. The Bank of France is allowed greater freedom within the limit as to maximum issue prescribed by the law. The Bank of Germany, with a fixed proportion allowed to be issued against securities, is compelled to hold good commercial bills against the remainder, these securities "turning themselves into money," in business phrase, at fixed and not remote dates. The national banks of the United States possess a circulation as rigidly secured as that of the Bank of England against bonds of the Government, but applicable, through the working of local banks, to the wants of each district. A maximum limit is fixed.

There are two schools of opinion with respect to a bank note issue. The first, headed by A. SMITH and RICARDO, holds "that immediate convertibility into coin is all that is requisite to prevent the excessive issue of paper" (speech of Sir R. Peel, 6th May 1844); the second, led by PEEL himself, assumes that unless issuers of notes "vigilantly observe the causes which influence the influx or efflux of coin, and regulate their issues of paper accordingly, there is danger that the value of the paper will not correspond with the value of coin." Hence the principle of Peel's measure "was to make the currency, consisting of a certain proportion of paper and gold, fluctuate precisely as if the currency were entirely metallic" (speech 13th June 1844, of Mr. Goulburn, who was chancellor of the exchequer in the administration of Sir R. Peel). It will be observed that neither in the case of the Bank of France nor of the Bank of Germany nor of the national banks of the United States is this rule enjoined. It is enforced as to the extra note issue of the Scotch and Irish banks (Bank Acts of 1844-45), but in their case the coin compulsorily held is not security for the circulation (see BULLION COMMITTEE, REPORT OF; CIRCULATING MEDIUM; CONVERTIBILITY OF BANK NOTES; CURRENCY DOCTRINE).

F. W. G.

BANK NOTE (UNITED STATES OF AMERICA).* In the United States the note circulation of the national banks, which are authorised to issue bank notes, is regulated in the main by the provisions of the act of 1863, bearing the significant title, "An Act to provide a national currency, secured by a pledge of United States bonds, and to provide for the circulation and redemption thereof." When the Federal Reserve System was established in 1913 the government decided that it was not advisable

to withdraw from circulation at once the old bond-secured bank notes. The federal reserve law accordingly continued the circulation of these notes, but contained provisions looking toward their gradual retirement. Up to the present, however, there has been little reduction of the national bank notes in circulation. The circulation of the 8240 banks carrying on business, 15th September 1922, was $726,789,000 (£145,358,000). The notes upon which the Federal Reserve System places its sole reliance for bank note elasticity are the federal reserve notes. These notes are obligations of the United States Government and are fully backed by certain forms of high-grade collateral. This consists of (1) paper endorsed by member banks and drawn for strictly commercial purposes; (2) bills of exchange endorsed by a member bank and bankers' acceptances bought by the federal reserve bank in open market; (3) gold and gold certificates. A gold reserve of not less than 40 per cent must be kept against outstanding federal reserve notes except in exceptional circumstances, when this proportion may be reduced provided a graduated tax is imposed upon the amount of the deficiency. Provision exists, moreover, to meet extreme emergencies, for a temporary suspension of any reserve requirement. Thus there is no fixed limit to the note issue, but beyond a certain point further expansion can only be secured at a rapidly increasing expense to those who require additional notes. The circulation of federal reserve notes is easily increased in times of need by member banks rediscounting suitable paper with their federal reserve bank and taking the proceeds in federal reserve notes. When the demand for the notes relaxes the public deposit them with the banks, and as national banks cannot count these notes as legal reserve money they tend to return to the federal reserve banks and are thus withdrawn from circulation. (See BANKS, NATIONAL.)

[An account of the system of note issue under the old banking laws and of that established by the Federal Reserve Act will be found in E. W. Kemmerer's *A B C of the Federal Reserve System*, 2d edition, Princeton, 1919. See also *American Banking*, H. P. Willis, Chicago, 1916; *Banking and Business*, H. P. Willis and G. W. Edwards, New York and London, 1922.] F. W. G.

BANKRUPTCY IN SCOTLAND. In early days the insolvent debtor in Scotland was treated practically as a criminal, and was subject to the penalties of rebellion against a command from the crown enjoining him to pay his creditor. From the Roman law there was, however, borrowed, a process of relief—the *cessio bonorum*—under which he gave up all his property and thus secured liberation and immunity from imprisonment on the ground of his debt, but was not discharged. Consequently it was precarious for him to try to resume business, and the tendency was for him to conceal some property before creditors could take steps against him. In 1621 an act of the Scots parliament was passed directed against gratuitous alienations to "conjunct or confident persons" on the eve of insolvency. In 1696 another act checked the giving one creditor any unjust preference over others; and it did so by providing, in substance, that where a person became notoriously insolvent or "notour bankrupt"—the evidence of which was to be that proceedings had been taken against him for debt, and that in consequence he had been imprisoned (or, afterwards, something legally equivalent), or had absconded or resisted arrest or retired into sanctuary—all unjust preferences granted by him within sixty days prior to the notour bankruptcy were to be annulled. It is here to be observed that the effect of the notour "bankruptcy" was not to bring about a distribution of his estate; it only limited his status; he might still continue in business, but thenceforth—and indeed at common law from the moment of actual insolvency—he must act as steward (or rather *negotiorum gestor*) for the whole of his creditors and he must use his best endeavour to treat them equally. But the creditors might be impatient; they might press their individual claims, and all the more so since the law still allowed certain privileges to the creditor first in the race for "diligence" or execution; whence too often ensued the ruin of the debtor, to the actual disadvantage of the general body of creditors. In all this every creditor fought for his own hand; the debtor must, so far as he could, treat them all equally; but the law did not provide any means of putting all the creditors on an equal footing until 1772, when the first Sequestration Act was passed, to endure experimentally for ten years. Sequestration at common law (French *mission en séquestre*) was a well-known proceeding in Scotland, analogous to appointing a receiver on an estate in chancery; a judicial factor was appointed by the Court of Session who managed an estate for the benefit of those interested until it was judicially ascertained who were the parties entitled, or until the occasion for taking the estate out of the hands of the administrator had passed over. On this analogy, the personalty (but curiously not the realty, for it was abhorrent to the ideas of the conveyancers of the time that realty should pass without feudal conveyances) became vested either in a judicial factor proposed by the creditors, or else, alternatively, in a trustee to be appointed by the creditors as if under a voluntary settlement. The judicial factor distributed the estate under the direction of the court; the trustee did so extra-judicially. In 1783 the experiment was felt, especially on the trustee system, to have been a success; a new experimental act was

passed in which SEQUESTRATION was confined to the estates of merchants and manufacturers, the whole estate, real as well as personal, became subject to division, the trustee reported to and acted under the control of the Court of Session, and those creditors who had acquired preferences by taking proceedings against the bankrupt within a certain time before the sequestration were put on an equal footing. By successive statutes this act was renewed with improvements; a permanent act was passed in 1839, which introduced the sequestration of the estates of deceased debtors; and the present leading statute is one of the year 1856 (19 & 20 Vict. c. 79) in which the same guiding principles are applied in detail, with these outstanding alterations, that sequestration is not confined to persons in trade, and that the procedure may be (and in practice is) carried through before the sheriff courts; while the Court of Session retains control of the whole bankruptcy administration after sequestration has been granted, through an officer of court called the Accountant in Bankruptcy,—now the Accountant of Court,—whose diligent supervision of the reports and accounts of trustees has been the key-stone of the Scottish system.

Sequestration proceedings are initiated either by a petition by the insolvent himself with concurrence of creditors to a certain amount, or by creditors to the same amount alleging notour bankruptcy and Scottish jurisdiction. On special application, or for special reasons, the court may appoint an interim judicial factor, or may in any case seal books, close premises, and keep the key until a trustee is elected and confirmed. Sequestration may be opposed by the debtor himself, or by any creditor who has a special interest; and it may be recalled on producing before the Court of Session a private deed of arrangement agreed to by a majority of the creditors in number and four-fifths in value (rare in practice) or by showing the Court of Session within three months that the bankruptcy procedure ought to be carried through in England or Ireland.

Suppose the court grants sequestration; a meeting of creditors is appointed, six to twelve days ahead, which is advertised in the *Edinburgh Gazette*. At that meeting the creditors elect a trustee (or trustees in succession), who must not be the bankrupt or any relative or confidential friend of his, or any creature of such, or one whose interests are opposed to those of the general body of creditors; otherwise, the court will not interfere with the creditors' choice. The sheriff presides at this meeting if two creditors call upon him to attend. Voting power in the election is according to amount of unsecured debt. The sheriff decides within four days whether any candidate for trusteeship is ineligible, and confirms the appointment of the trustee on his finding security either for his whole dealings or for a sum limited by the creditors at their first meeting. The trustee at once reports himself to the accountant in bankruptcy. The trustee is assisted or supervised by three "commissioners"—a committee of inspection chosen at the first meeting of creditors; they concur with him in compromises and references to arbitration, they declare the dividends, and they may report independently to the creditors.

The trustee cannot resign, but may be removed without cause assigned by a majority of creditors. His first duty is to make up an inventory and valuation of the whole estate and to send that to the accountant. The bankrupt is bound to afford him every assistance in preparing this; if he does not, or if he obstructs the administration by refusing to execute any necessary deed, he may be imprisoned; but he is paid for his assistance. After confirmation the trustee applies to the sheriff to fix a day for public examination of the bankrupt; at that examination the bankrupt may, if need be, be committed to prison till he shall make full and satisfactory answers to the questions put; and his relatives and friends (wife, etc.) may be brought before the sheriff and examined as to disposal of property.

The bankrupt may be discharged (1) on acceptance of a composition by his creditors (four-fifths in value on a first offer, or nine-tenths in value on a subsequent offer) at their first or second meeting being reported to the court; or (2) without composition if the creditors are unanimous, or if a majority in number and four-fifths in value concur after six months or a majority in number and value after eighteen months or without any consent after two years; but in no case can he get discharge without showing the court, either that he has paid or secured to the creditors a dividend of 5s. in the £, or that his not having done so was owing to circumstances for which he could not justly be held responsible; and discharge may be withheld for misconduct on his part.

Cessio bonorum has since 1880 and 1881 been so far assimilated to sequestration that it is now in substance merely a cheaper form of procedure for small estates. The trustee is appointed by the sheriff; and there are no commissioners, but proof of debts takes place, and discharge is granted or withheld as in sequestration.

The principal changes in the law since 1856 have been directed towards enabling discharge to be withheld for misconduct (1860), towards extending the preference of clerks and workmen (1875), towards the abolition of imprisonment for debt (1880 and 1882), towards the amendment of procedure in cessio (1880), and granting discharge in cessio (1881), towards dealing with fraudulent debtors and those who fail to keep accounts (1881), and towards rendering

undischarged bankrupts incapable of holding certain offices of trust and bringing them under the criminal law if they take credit for more than £20 without disclosing their condition (1884).

With regard to liquidation by private arrangement: the method is—(1) Conveyance by debtor to trustee ("trust-deed for behoof of creditors"); (2) mutual contract by all the creditors to act in common according to definite scheme ("deed of accession"). The main point of weakness in this is the inadequacy of means to keep the trustee up to his duty; the contract should provide machinery for this. If this be done the method is regarded with favour. Extrajudicial composition contracts between insolvent debtors and their creditors are also not uncommon in practice.

[Bell's *Commentaries on the Law of Scotland*, 1870.—Mr. Henry Goudy's *Law of Bankruptcy in Scotland*, 1886.] A. D.

BANKRUPTCY LAW AND ADMINISTRATION (England). A good bankruptcy law must aim at the attainment of three distinct and sometimes conflicting objects; first, the speedy and economical distribution of the debtor's property amongst his creditors; secondly, the release of the debtor from his load of debt, so far as this may be justified by his conduct; and thirdly, the punishment of fraud, reckless trading, and personal extravagance. The policy of the bankruptcy laws has varied considerably. Sometimes one, sometimes another of the above-mentioned objects has been the guiding principle of the enactment, and various machineries have been devised for giving effect to them. During the last hundred years some forty-six acts relating to bankruptcy have been passed. Roughly, their effect may be described as follows: Before 1831 the full control of the administration of bankrupt estates was in the hands of the creditors, the result being wholesale mismanagement and general dissatisfaction. In 1831 an act, known as Lord Brougham's Act, introduced a system of official administration. Official assignees were appointed to the London Bankruptcy Court, but not in the country districts. After some years' trial of the system of official assignees in London, and after a favourable report from a royal commission, the system was extended in 1842 to the country generally. The official assignees were again favourably reported on by Select Committees in 1847 and 1849. In 1861 opinion had begun to turn against them, and an act was passed considerably limiting their functions. In 1864 a select committee, on what seems inconclusive evidence, wholly condemned the system of official assignees. These officers were abolished by the act of 1869, and once more a system of voluntaryism was inaugurated, with the wonted result. Creditors were supine, and estates were wrecked and plundered by the rapacity of the lower class of trustees. Every facility was offered to fraudulent debtors, and they were not slow to avail themselves of their opportunities. A few years' trial of the act resulted in its general condemnation, but it was not till 1883 that any legislative change was effected. In that year Mr. Chamberlain, then president of the Board of Trade, succeeded in carrying the act which introduced the system now in operation. The Bankruptcy Act 1883 (46 & 47 Vict. c. 52), now re-enacted with amendments by the Bankruptcy Act 1914 (4 & 5 Geo. V. c. 59), makes a fresh departure in bankruptcy legislation. In the first place it severs judicial from administrative functions. Judicial functions are necessarily left to the courts, but administrative supervision and control are intrusted to an executive department of the state, namely the Board of Trade. Creditors still retain the general control over the debtor's estate, but his conduct is subject to an independent investigation with a view to his punishment if his insolvency has been caused by culpable recklessness or fraud. Trustees are subjected to the supervision of the Board of Trade, who require security from them, audit their accounts, and exercise a general superintendence over their dealings. The act of 1869 proceeded on the theory that the debtor and his creditors were the only parties concerned in a bankruptcy. The present measure recognises the principle that bankruptcy is a matter of public concern affecting the community at large. Speaking broadly, the act establishes one entrance into, and two exits from, the state of statutory insolvency. The receiving order, as it is called, is the entrance gate. By the receiving order the debtor's property is put under the charge of an official of the Board of Trade, until the creditors, with the leave of the court, have determined whether the debtor shall be allowed to terminate his insolvency by a composition or scheme of arrangement, or whether he shall be adjudicated a bankrupt and his affairs be wound up in bankruptcy proper. In either case there is a turnstile through which the debtor must pass, namely, the public examination at which his conduct and financial dealings are investigated in open court.

The courts which exercise bankruptcy jurisdiction are the High Court and the county courts. For bankruptcy purposes England and Wales have been mapped out into 135 districts. The bankruptcy business of the London district is allocated to the High Court, while in the country districts the county courts are the courts of original jurisdiction. To secure uniformity of practice, one of the High Court judges is specially appointed by the lord chancellor to take bankruptcy business, and it is provided that he shall always be a member of the divisional court to which bankruptcy appeals from the county courts are brought.

The bankruptcy department of the Board of Trade consists first of local officers called official receivers, and secondly of a central staff under the inspector-general, who audit trustees' accounts, and supervise the conduct and dealings both of trustees and of the local officers. Each bankruptcy district has its official receiver, but the same officer may be appointed official receiver for two or more districts, or on the other hand, two or more receivers may be appointed to one district according to local requirements. An OFFICIAL RECEIVER, besides being an officer of the Board of Trade, is made an officer of the court, having jurisdiction over his district. The object of the latter provision is to give him free access to court documents, and to enable him to consult the judge without the formality of a motion in open court. His reports are made *prima facie* evidence of the matters contained in them. His duties are declared by the act to "have relation both to the conduct of the debtor and the administration of his estate" (§ 72). As regards the debtor, it is the duty of the official receiver to investigate his conduct and to report to the court thereon, to take such part as the Board of Trade may direct in his public examination, and also to assist when requisite in his prosecution. As regards the estate, it is the official receiver's duty to act as interim receiver pending the appointment of a trustee, and as manager when a special manager is not appointed; to summon and preside at the first meeting of the creditors, to issue proxies, to report to the creditors on any proposal by the debtor for a scheme or composition, to advertise the proceedings, and to act as trustee during any vacancy in that office. In cases where the estate does not exceed £300, the official receiver becomes the trustee unless the creditors expressly supersede him. In short, this office is made the keystone of the present system, and the success or failure of the act must mainly depend on the efficiency or non-efficiency of the official receivers.

Bankruptcy proceedings may be commenced either by the debtor himself or by a creditor whose debt amounts at least to £50. If the petition is presented by a creditor it must be founded on one of the overt acts of insolvency, called acts of bankruptcy, which are specified in § 1. To prevent an influx of paupers a £5 stamp is charged on bankruptcy petitions, and a deposit of £5 is also required to cover preliminary expenses. The first result of a bankruptcy petition, properly substantiated, is the making of a receiving order by the court. This order does not divest the debtor of his property, but puts the official receiver in charge of his property, and stays proceedings by unsecured creditors. As soon as the receiving order is made the debtor is bound to give the official receiver full information as to his affairs and failure, and to make out a formal statement of his assets and liabilities for submission to the first meeting of creditors. The first meeting should be held within fourteen days of the receiving order. Proxies must be on an official form. A creditor can only give a general proxy to a person in his regular employment or holding a general power of attorney from him, or to the official receiver. At the first meeting the debtor may propose to his creditors that his insolvency should be terminated by a composition or scheme, thereby avoiding the disabilities of bankruptcy proper (§ 16 of act of 1914). If this proposal be not assented to, the debtor must be adjudged bankrupt. If it be assented to, the assent is provisional. The debtor must still go through his public examination. At the meeting the proposal for a composition or scheme must be accepted by a majority in number representing three-fourths in value of all the creditors who have proved. When the public examination is concluded the matter then goes before the court for its approval. The court, before sanctioning the composition or scheme, hears the report of the official receiver, and has to consider whether it is calculated to benefit the general body of creditors, and also whether the debtor's conduct has been such as to justify his escape from the consequences of bankruptcy. When the composition or scheme is approved by the court it is binding on any dissentient minority of creditors, the receiving order is rescinded, and the debtor is remitted to the full control over his affairs. If, however, the provisions of the composition are not carried out, the debtor is still liable to be adjudged bankrupt. Section 21 of the act further provides that a debtor who has been adjudged bankrupt may propose a composition or scheme under the like terms and conditions as before bankruptcy. If the composition or scheme is sanctioned by the court, the adjudication of bankruptcy is annulled.

When it has been decided that a debtor's estate shall be administered in bankruptcy proper, the first business of the creditors is to elect a trustee. The trustee cannot, however, act till he has received the certificate of the Board of Trade. Before he gets his certificate he must give security for the due performance of his duties to the Board; and the Board have further the right to object to his appointment if he is an unfit person, or if his interests appear to clash with the interests of the creditors generally. In the interim the official receiver acts as trustee. As soon as a debtor is adjudged bankrupt the whole of his property vests in his trustee, and any further property which he may acquire before he gets his discharge also vests in his trustee. This rule does not apply to the debtor's personal earnings, though, if he has anything in the nature of a fixed income, the court may make an order charging a portion of

it for a specified time. It is to be noted further that the trustee's title relates back to the earliest act of bankruptcy committed by the debtor within three months of the petition, and express provision is made for avoiding fraudulent settlements and conveyances made by the debtor on the eve of his bankruptcy (§§ 43-45). The main duty of the trustee is to realise the debtor's estate with all convenient speed, and to distribute it rateably among the creditors. The bankruptcy laws, however, recognise certain exceptions to the rule of equal distribution. Priority is given within certain limits to rates and taxes and to claims for wages or salary by workmen, servants, and clerks (§§ 33-35). On the other hand, certain debts are postponed; for instance, a partner is not allowed to prove against his co-partner's estate in competition with the creditors of his firm. The landlord's right to distrain for six months' rent is preserved. The rights of creditors holding security are also saved. A secured creditor may either give up his security and prove for his whole debt, or, subject to the trustee's right to redeem under certain conditions, retain his security and prove for the balance of his claim. The trustee, as a rule, exercises his functions under the guidance of a committee of inspection appointed by the creditors, but if no such committee be appointed, their duties are performed by the Board of Trade (§ 20).

As soon as a bankrupt's public examination is concluded he may apply for his discharge. Notice of this application must be given by the official receiver to every creditor who has proved. At the hearing the court receives from the official receiver a report on the debtor's conduct and the causes of his failure. The official receiver, the trustee, and any creditor who appears are entitled to be heard on the matter. If it appears that the debtor has been guilty of any conduct amounting to a misdemeanour under Part VII. of the act of 1914, the court must ordinarily refuse the discharge. The debtor then can only escape from bankruptcy and its consequent civil disqualifications by payment of his debts in full with costs and interest. If the debtor has not committed a misdemeanour, but has been guilty of minor misconduct, the court has a discretion either to refuse the discharge, or to suspend it or make it conditional. A common condition is to order judgment for a specified sum to be entered up against the debtor. This judgment can only be enforced by leave of the court. Section 26 of the act of 1914 specifies twelve classes of facts involving minor misconduct which prevent the court from granting an unconditional and immediate discharge; for instance, not keeping proper business books (see BOOK-KEEPING), trading with knowledge of insolvency, rash speculation, previous bankruptcy, fraud, or fraudulent breach of trust, or not being able to pay 10s. in the £. Under previous acts it was found that an undischarged bankrupt frequently began to trade again and to incur fresh liabilities with no means of meeting them. To meet this evil § 155 of the act of 1914 makes it a criminal offence for an undischarged bankrupt to obtain credit to the extent of £10 or upwards from any person without informing such person that he is an undischarged bankrupt. If the debtor's financial conduct has been blameless he is entitled to an unconditional discharge, and he can obtain a certificate removing any statutory disqualifications consequent on bankruptcy. The order of discharge releases the debtor from all debts and liabilities provable in the bankruptcy, with the exception of certain crown debts and debts incurred through his personal fraud or fraudulent breach of trust, and claims arising out of seduction, affiliation or divorce court proceedings.

The act of 1914 embodies suggestions of the Bankruptcy Law Amendment Committee of 1906. Thus, the Summary Jurisdiction Act can now be applied to offenders under the Debtors Acts; *e.g.* failure to make full discovery of affairs, concealment of debt, or mutilation of books are punishable after summary trial before a Stipendiary Magistrate, or Justices of the Peace, the onus of proving innocent intent falling on the debtor, whereas previously, conviction could only be by trial before a jury who had to be convinced that such offences were committed with intent to defraud. Rash speculation other than in the course of the debtor's business, and unjustifiable extravagance, are included as offences against the acts, while failure to keep proper books for two years previous to the insolvency is a misdemeanour if the debtor has previously been made bankrupt or effected a deed of arrangement. Other clauses reduce the amount of credit obtainable by an undischarged bankrupt considerably, and penalise him for trading under a name unknown to his creditors, and give facilities for obtaining an order against an alien living abroad who has carried on business here either personally or through a partner or agent. Under this act a married woman may be made bankrupt even if not trading separately from her husband; the latter's claims for monies lent her for business purposes are postponed to those of other creditors.

The administrative working of the Bankruptcy Act is the subject of an annual report by the Board of Trade to both houses of parliament. For the law on the subject, see the treatises of Baldwin, Chalmers and Hough, Robson, Vaughan Williams, and Yate Lee. M. D. C.

BANVIN, DROIT DE. An oppressive seigniorial right in France under the old *régime*. By it a certain interval, generally a month or forty days, was fixed after the vintage during which the lord's wine alone could be sold, and a

peasant had to pay large sums for leave to sell his wine before the expiration of the period.

[De Tocqueville, *France before the Revolution*, note lxxvii.] R. L.

BARBARY COMPANY, The. See Turkey Company.

BARBON, Nicholas, M.D. (1640 ?-1698), probably the son of Praisegod Barebone, was born in London, studied medicine at Leyden, graduated M.D. at Utrecht in 1661, and was admitted an honorary fellow of the College of Physicians in December 1664. After the great fire of 1666 he was instrumental in establishing the first fire insurance office in London (1681); he was one of the most considerable re-builders of the city. He was M.P. for Bramber in 1690 and 1695, founded a land bank, which was united with that of Briscoe in 1696 and is reported to have been successful, and was among the projectors of the short-lived National Land Bank. He died in 1698, having appointed John Asgill, the economist, to be the executor of his will, and directed that none of his debts should be paid.

Barbon's works were numerous and deserve some extended notice, as his views were, though with some failings which we shall have to notice, remarkably in advance of his time, and even approaching to modern views on value, interest, rent, and foreign trade. He published in 1684 *A Letter to a Gentleman in the Country giving an Account of the Two Insurance-Offices; the Fire-Office and Friendly Society*, setting forth the advantages of his own institution and the disadvantages of its rival. In 1685 appeared (anonymously) his *Apology for the Builder; or a Discourse showing the Cause and Effects of the Increase of Building*. He opposed the opinion then prevalent that London was growing too large, and that the building new houses there drained the inhabitants from the country. He discussed in this pamphlet the theory of "rent." Its origin he explains in the following passage: "When mankind is civilised, instructed with arts, and under good government . . . the rich are fed, clothed, and housed by the labours of other men, but the poor by their own, and the goods made by this labour are the rents of the rich men's land (for to be well fed, well clothed, and well lodged without labour either of body or mind, is the true definition of a rich man)." (Reprinted in *A Select Collection of Scarce and Valuable Economical Miscellaneous Tracts*. Reprinted for Lord Overstone, 1859, pp. 1-26 of that volume; see M'Culloch, *Literature*, pp. 350, 351). In 1690 Barbon published *A Discourse of Trade. By N.B., M.D., London. Printed by Tho. Milbourn, for the Author*, 1690. In this treatise (92 pp. 12°), which hitherto has been scarcely noticed by those who have written on the history of economics, he displays as much ingenuity as any one of his greatest contemporaries. In the preface he attributes the importance which is ascribed to trade to the invention of gunpowder, foreign trade being considered necessary on account of its furnishing the supplies required by the country. But he thinks that trade has been considered from a too narrow point of view, especially by merchants like Thos. Mun, who "apply their thoughts to particular parts of trade, wherein they are chiefly concerned in interest." The first chapter treats "of trade and the stock, or wares of trade." Trade, according to him (Barbon), consists in "the making and selling of goods for another;" its parts are handy-craft trade and merchandising. Its aim is to make a bargain; in every bargain the wares to be sold, their quantity and quality, their value or price, the money or credit by which they are bought, and "the interest that relates to the time of performing the bargain" are to be considered. "The Stock and Wares of all Trade are the Animals, Vegitables, and Minerals of the whole Universe, whatsoever the Land or Sea produceth" (p. 2). They are either natural or artificial wares. Both are called staple commodities of the countries where they abound, either native or foreign. The native staple of each country consists of its actual and unexhausted riches; this shows the error of Mr. Mun, who thinks that nations can get rich by parsimony like individuals (p. 6). This native staple is the basis of foreign trade, which is an exchange of commodities (p. 7). Foreign staples, even if carried on by monopoly, are uncertain wealth; this he illustrates by the changes brought about by the possession of the East India trade. The second chapter deals with "the Quantity and Quality of Wares." The third chapter, "of the Value and Price of Wares" is one of the most remarkable in this work. "The Value of all Wares arises from their Use; Things of no Use have no Value, as the English Phrase is, *they are good for nothing.*" Thus he approached more closely than any one of his contemporaries to modern views on value and price. "The Price of Wares," he says, "is the present Value; And ariseth by Computing the occasions or use for them with the Quantity to serve that Occasion; for the Value of things depending on the use of them, the *Over-plus* of Those Wares, which are more than can be used, become worth nothing; So that Plenty in respect of the occasion, makes things cheap, and Scarcity, dear" (p. 18). These elements being variable as well as the Wants of the Mind, and most things being useful through supplying the latter, "there is no fixt Price or Value of anything for the Wares of Trade" (p. 18). But, "There are two ways by which the value of things are a little guessed at; by the Price of the Merchant, and the Price of the Artificer; the Price that the Merchant sets upon his Wares is by reckoning Prime Cost, Charges, and Interest, the Artificer's Price includes the Cost of the Materials and the time of working them. The Price of the Artificer is according to the Value of the Art" and his skill (p. 19). "But the Market is the best Judge of Value; for by the Concourse of Buyers and Sellers, the Quantity of Wares, and the Occasion for them, are best known" (p. 20). The next chapter, "of Money, Credit, and Interest," begins with the following definition: "Mony is a Value made by a Law; and the Difference of its Value is known by the Stamp and Size of the Piece" (p. 20). It has two principal uses: "It is the Measure of Value, By which the Value of all other things are reckoned," and "It is a Charge

or Pawn for the Value of all other Things. For both reasons, "the value of mony must be made certain by Law." Having "its sole Value from the Law," its Metal, whether Brass (like in Spain), or Copper (Sweden), or Tin (English farthings), is not material (p. 21), "6d. in Farthings will buy the same thing as 6d. in Silver." Foreign coins, upon which their country's law has no force, go therefore by weight and are of no certain value (p. 22). The chief advantage of gold and silver money is to prevent counterfeiting, besides its other uses for plate, etc., and its easy exportation, which the example of Spain shows it is impossible to prohibit (p. 23). It has no intrinsic value, but two values ; one certain, because of the law, another variable like the value of gold and silver or other metals (p. 25). It is only time and place gives a difference to the value of all things, "Nothing in itself hath a certain Value." Credit is "a Value raised by Opinion" (p. 27) ; Barbon distinguishes two sorts of credit, the one grounded upon the ability of the buyer, a short credit mostly ; the other upon his honesty, a long one. He defends the necessity of erecting a public bank in London (pp. 28-31). Interest is, according to him, "the Rent of Stock, and is the same as the Rent of Land : the First is the Rent of the Wrought or Artificial Stock ; the Latter, of the Unwrought or Natural Stock" (p. 31). Barbon notes that "Interest is commonly reckoned for Mony, . . . but this is a mistake : for the Interest is paid for Stock. . . . No Man takes up Mony at Interest to lay it by him, and lose the Interest by it" (pp. 31, 32). The clear exposition of this doctrine places Barbon, as an economist, above both Petty and Locke, and it was not till sixty years later that Joseph Massie (1750) and Hume rediscovered the correct theory of interest. The uses of interest are to measure, 1st, profit and loss in trade, 2nd, the value of the rent of land ; the value of the last being reckoned "by adding three years' Interest more than is in the Principle (*sic*)." Therefore interest must be fixed. The praise which Barbon bestows on trade (foll. chapter "of the use and benefit of trade,") forecasts the celebrated passages on the consequences of the division of labour in the *Wealth of Nations*, especially his denying of the importance of Increasing money. "It is the Natural Stock that is the Real Value, and Rent of the Land" (p. 37). In a very interesting digression Barbon describes the civilising influence of trade, and maintains the chief causes which promote trade to be "industry in the poor and liberality in the rich" (p. 61). Against the mercantilist views of "sparing for exportation" he maintains, that "by not consuming the Goods that are provided for Man's Use, there ariseth a dead Stock, called Plenty, and the value of those Goods fall. . . A Conspiracy of the Rich Men to be Covetous and not spend, would be as dangerous to a Trading State as a foreign War" (p. 63). Clothing and building employ a great variety of trades, and the luxury of town-life increases the revenues (p. 70). In the last chapter Barbon declares that "the Two Chief Causes of the Decay of Trade are the many Prohibitions and high Interest" (p. 71), his argument being "that the Prohibiting of any foreign Commodity doth hinder the Making and Exportation of so much of the Native as used to be Made and Exchanged for it. . . . The Native Stock for want of such Exportation Falls in Value, and the Rent of the Land must fall with the Value of the Stock" (p. 72). This work of Barbon's contains the ablest refutation of the theory of the balance of trade previous to Hume and Adam Smith (see Balance of Trade). Barbon refutes the common argument for prohibition that the consumption of foreign commodities hinders the production and consumption of the native ; for the consumption of foreign wares arising from the wants of the mind, the setting up obstacles to it will not encourage the consumption of native wares. A general prohibition would be the ruin of all trading nations ; if the rare case should occur that the use of foreign goods checked the consumption of native goods, duties may be imposed to differentiate their consumption (pp. 75-78). The rate of interest being higher in England than in Holland, is a second obstacle to trade, for through this the Dutch traders are enabled to undersell the English (pp. 78-87). Any injury to those persons who live upon the interest derived from Money would be remedied through the rise of land, the interests derived from which would be hereby better secured. "For the Land is the Fund that must support and preserve the Government ; and the Taxes will be lesser and easier payd" (p. 91). Its support is the more important "because it doth not Disturb, Lessen, nor Alter the Value of any Thing else" (p. 92). The *Discourse of Trade* was attacked by an anonymous author *E. H., Reasons against Reducing Interest to Four per Cent*, 1694. Barbon answered in *An Answer to Paper Entituled Reasons against Reducing Interest to Four per Cent*, (2 sh. fol.,) without, however, giving any further proof for his proposal. In 1695, it seems, was written *An Account of the Land Bank, showing the Design and Manner of the Settlement*, etc. (2 sh. fol.) "Mostly collected out of my writings," says John Briscoe, referring to it in *An Account of the National Land Bank*. Brit. Mus. 816 m. 10 ; with John Asgill he drafted the rules of the National Land Bank ; *The Settlement of the Land Bank* (Lord Somer's Tracts, vol. xi.), 10th August 1695. The last work of Barbon is *A Discourse Concerning Coining the New Money Lighter. In Answer to Mr. Lock's Considerations about Raising the Value of Money*. By Nicholas Barbon, Esq., 1696. Referring to the definition of money in his former work he advocates the well-known project of W. Lowndes of "raising the coin." He thinks that a recoinage according to the old standard would effect a want of specie, and that the steady rise of bullion made a proportional raising of the value of coin necessary. For "the Balance of Trade (if there be one) is not the cause of sending away the Money out of a Nation : but that proceeds from the difference of the Value of Bullion in several Countries, and from the Profit that the Merchant makes by sending it away, more than by the Bills of Exchange" (p. 59). This passage, it has been remarked by M'Culloch, anticipates the "currency principle" as expounded by Ricardo in his

pamphlet on *The High Price of Bullion*, 1811 (Works, 1886, p. 267-8). In order to prove the expediency of his proposal, Barbon repeats his doctrine of money as given in the *Discourse of Trade* (p. 20), laying stress upon the maxim, that its value is not given by the quantity of silver in each piece, but by the authority of government. He supports this opinion by most incredible sophisms. He ascribes the affluence of gold to inadequate rating of the value of silver money (p. 77), and he advocates his position by the history of English and foreign monetary policy and legislation (pp. 74-94). Though in this point the opinions of Barbon are erroneous he, however, attacks very ably Locke's theory that the value of money was the result of common assent (p. 9). Barbon distinguishes, with great ingenuity, between the value and the "vertue" of a thing, the latter being the same at all places, the former varying according to its plenty or scarcity (p. 7). His refutation, in this work, of the doctrine of the balance of trade, his remarks on the preference given to gold and silver, which he compares with the fable of Midas, on the restraint on consumption, and in consequence on prohibition of foreign goods (pp. 35-49), are developments of opinions expressed in his former writings. There is, according to him, but one infallible symptom to know when Trading Nations grow rich: by the increase of population manifesting itself by the enlargement of towns and also of the naval strength (p. 52).

[The *Discourse of Trade* is quoted by E. H., *Reasons for the Abatement of Interest to four in the Hundred*, 1692, p. 6.—E. H. wrote: *Decus et Tutamen; or our New Money as now coined in full Weight proved to be for the Honour, Safety, and Advantage of England—written by Way of Answer to Sir Richard Temple and Dr. Barbon*, 1696. On the latter cp. M'Culloch, *Literature*, p. 157.—M'Leod, *Dictionary of Political Economy*, pp. 232, 233.—K. Marx, *Capital*, vol. i. pp. 2-4.—Cunningham, *The Growth of English Industry and Commerce*, p. 351, 368, ed. 1882.—C. Walford, *Insurance Cyclopædia*, vol. i. p. 251, vol. iii. p. 459, and the present writer on Nicholas Barbon, in "Ein Beitrag zur Vorgeschichte der Klassischen Oekonomik," Conrad's *Jahrbücher für Nationalökonomie und Statistik*, xxi. Bd. N.F. p. 561-590 (1890).] S. B.

BARING, Sir Francis, Bart., was born in 1740, of German extraction, the founder of the famous financial house of Baring Brothers and Co. Erskine styled him "the first merchant in Europe." He died 11th September 1810.

He wrote—

The Principle of the Commutation Act Established by Facts, London, 1786, 8vo (two editions; supports the reduction of duties on tea and other commodities).—*Observations on the Establishment of the Bank of England, and on the Paper Circulation of the Country*, London, 1797, 8vo.—*Further Observations*, London, 1797, 8vo (describes the panic of 1793, and supports the policy of restriction).—*Observations on the Publication of W. Boyd* [entitled *Letter on the Influence of the Stoppage of Issues in Specie*], London 1801, 8vo. H. R. T.

BARNARD, Sir John, was born at Reading, of Quaker parents, in 1685, and died at Clapham, 1764. He entered the London wine trade, was M.P. for London from 1728-1761, and was knighted in 1732. He was chosen lord mayor in 1737, and opposed Walpole; ultimately he became one of the foremost financial authorities in England, and helped to abate the run on the Bank of England in 1745. He wrote—

Reasons for the Representatives of the People of England to take advantage of the Present Rate of Interest for the more Speedy Lessening the National Debt, London, 1737, folio (detailing an unsuccessful proposal made by Barnard in parliament to reduce the rate to 3 per cent).—*A Defence of Several Proposals for Raising of Three Millions for the Service of the Government, with a Postscript on Publick Credit*, London, 1746, 8vo.—*Letter to an M.P. on the Rejection of the Scheme*, London, 1746, 8vo.—*Considerations on the Proposal for Reducing the Interest on the National Debt*, London, 1750, 8vo (recommending Pelham's project).—*Some thoughts on the Scarcity of Silver Coin, with a Proposal for Remedy*, London, 1759, folio (single sheet). H. R. T.

BARRATOR. One who incites to litigation or quarrels. A person who is found to be a common (habitual) barrator is guilty of the offence of barratry, which is punishable by imprisonment and fine; and if the offender's profession be in any way connected with the law, he may also be forbidden to practise for the future. The word barrator in a now obsolete sense also implied a deceitful person, and from the word in this sense the expression barratry as used in maritime law is probably derived. In this application the word means a wilful or grossly negligent act of the master of a ship by which the owner is damaged. Barratry is one of the risks generally excepted in bills of lading, and it is one of the perils insured against on ordinary marine insurance policies. E. S.

BARRINGTON, Shute (1734-1826), successively Bishop of Llandaff, Salisbury, and Durham. He established in 1795 one of the earliest co-operative stores at Mongewell (Oxfordshire). He was president of the Society for Bettering the Condition and Increasing the Comforts of the Poor (1796).

[Bishop Barrington's practical work is fully described in G. J. Holyoake's *Self-help a Hundred Years ago*, chs. i. iv. viii. xiv. xv. xxviii. 1888 (see Bernard, Sir Thomas).—*Dictionary of National Biography*, vol. iii. p. 294.] S. B.

BARTER. In primitive states of society exchange of commodities is effected directly, and without the intervention of money; such a method of exchange is called barter. It is highly probable that loan preceded exchange, at least as regards scarce articles, the more plentiful commodities being distributed amongst individuals in joint or separate ownership. In the case of a loan to a stranger, an owner would not have the same guarantee for the return of the article as if the loan were made

to a member of his tribe, and hence he would require some equivalent in return. Thus we reach exchange in the form of barter.

JEVONS has pointed out the inconveniences of barter: (1) want of coincidence; (2) want of a measure of value; and (3) want of means of subdivision. (*Money, and the Mechanism of Exchange*, London, 1882.) These inconveniences are avoided by the introduction of money (see MONEY), which serves as a medium of exchange. The metals prove to be the most convenient commodities for effecting exchanges, and amongst metals, gold and silver specially possess the qualities essential in money.

But metallic money in bulk is weighty; it can be transmitted to a distance only at considerable expense and risk; whilst its use involves loss by wear and tear. To avoid these disadvantages representative moneys in the form of promises to pay have been introduced.

When promises to pay came to be accepted in return for commodities, it was seen that wherever mutual dealings existed between two persons, equivalent quantities of goods estimated in money could be set off, so as to pay for each other. The origin of this modern system of set off may be traced to the Roman Law (Hunter's *Roman Law*, London, 1885, p. 832). But the system was perfected by the introduction of BILLS OF EXCHANGE and CHEQUES, and the development of the modern clearing system (see CLEARING HOUSE). In foreign trade where two countries are constantly buying the one from the other, bills of exchange enable the goods passing in one direction to pay for those going in the opposite direction, and even where two countries do not have mutual dealings, they will be able to obtain payment for their exports by imports from other countries with which both are accustomed to trade (see Goschen's *Foreign Exchanges*, London, 1888).

In the home trade cheques are used as well as bills. By means of cheques traders are able to transfer portions of their book credit at their banks to third parties in exchange for commodities, and the institution called the Clearing House balances the mutual indebtedness for the traders (Jevons's *Money*). Such a method of exchange is really barter: metallic money being used to compare the values of commodities, and ceasing to effect exchanges, except where a balance of indebtedness can be discharged in no other way.

Barter underlies the distribution of the annual produce of a nation amongst the various classes who assist in production. Though the landlord, the employer, the capitalist, and the labourer, receive their respective shares in money, yet to the economist such money represents only produce or its equivalent in other commodities. For instance, the articles that the labourer buys with his wages are the real return he receives for his services, and his services may be regarded as bartered for such articles (see Sidgwick's *Political Economy*, bk. ii. ch. i.; Marshall's *Principles of Economics*, p. 395). See TRUCK ACTS. J. E. C. M.

BARTER AND EXCHANGE. Barter, as distinct from exchange, is defined by the absence of money both as a medium of exchange and a measure of value. In the absence of a measure of value, complicated transactions between several dealers are hardly possible; and accordingly barter is generally characterised by the absence of competition. In the absence of competition bargains are not *determinate* in the same sense as in a perfect market. In the former, unlike the latter, case you might suppose the dispositions of the parties, their demand curves or "schedules" (Marshall) known, and yet even theoretically be unable to predict what would be the terms of the bargain (see COMPETITION AND REGULATION; VALUE). As JEVONS says of such a case,—with, in the context, unnecessary emphasis on the *indivisibility* of the commodity exchanged,—"The equations of exchange will fail. . . I conceive that such a transaction must be settled upon other than strictly economical grounds. The result of the bargain will greatly depend upon the comparative amount of knowledge of each other's positions and needs which either bargainer may possess or manage to obtain in the course of the transaction" (*Theory of Political Economy*, pp. 130-134, 2d ed.) To which Mr. Price adds, "Nor indeed, did they possess the gift of clairvoyance, would the problem be necessarily solved" (*Industrial Peace*, p. 54). It is important to study this property of barter not so much on account of the rudimentary transactions to which the term is properly confined as for the sake of their analogy to the dealings of monopolists and combinations in advanced societies.

[The subject in question is discussed in the following passages. Auspitz and Lieben, *Theorie des Preises*, p. 381.—Edgeworth, *Mathematical Psychics*, pp. 20-56.—"Observations on the Mathematical Theory of Economics," *Giornale degli Economisti*, March 1891.—Marshall, *Principles of Economics*, "Note on Barter,"—Menger, *Grundsätze*, ch. iv.—Price, *Industrial Peace*, pp. 14 and 54.—Sidgwick, *Political Economy*, bk. ii. ch. x.

The formation of appropriate conceptions on the subject is aided by those economists who, improving on the ordinary "Robinsonnade," introduce a *second* primitive economic man. Good examples occur in Courcelle Seneuil's *Traité théorique et pratique*, and Mr. Gonner's textbook of *Political Economy*.] F. Y. E.

BARTON,* JOHN, of Stoughton, the author of several clever but somewhat unsound pamphlets.

Observations on the Circumstances which influence the Condition of the Working Classes, London, 1817, 8vo (see M'Culloch's *Principles of Political Economy*).—*Inquiry into the Causes of the Progressive Depreciation of Agricultural Labour in*

Modern Times, London, 1820, 8vo (stated to be owing to the depreciation of the value of corn). —*Inquiry into the Expediency of the Existing Restrictions on the Importation of Foreign Corn*, London, 1833, 8vo. H. R. T.

BASTIAT, FRÉDÉRIC. This well-known French economist, a friend of COBDEN, born 1801 at Mugron, near Bayonne, died 1850 at Rome. But for a few casual circumstances which drew out his literary powers, Bastiat would have died comparatively unknown, his first book only appearing in 1845, five years before his death. He had lived up to that date in retirement, working hard, but producing little. The son of a merchant in the Spanish trade, he was left an orphan when nine years old. As a man, he tried his hand, without great success, first in business, in the establishment of his uncle, then in farming at Mugron on the estate which he inherited at the death of his grandfather, 1825. Appointed after the revolution of 1830 *juge de paix* of his canton, he seemed destined to die in the little town where he had been born, limiting his ambition to the direction of a small scientific society whose discussions appear to have been *de omni re scibili et quibusdam aliis*. His first pamphlets were little memoirs on local matters, the interest of which, notwithstanding the high qualities of style and form they possessed, was necessarily limited to a narrow circle; their titles are *Aux Electeurs du département des Landes* (1830); *Réflexions sur les pétitions de Bordeaux concernant les douanes* (1834); *Le Fisc et la Vigne* (1841); *La question vinicole* (1843); *La Répartition de la contribution foncière dans les Landes* (1844).

To England belongs the honour of having lighted up in Bastiat the sacred fire of thought. An English journal to which he subscribed almost by accident, the *Globe*, informed him of the foundation and progress of the ANTI-CORN LAW LEAGUE, the existence of which was barely known in France. The examples of Cobden, BRIGHT, Thompson, Moore, and Fox roused Bastiat, who resolved to imitate them. A few weeks later and the *Journal des Economistes* received from the farthest end of the district of the Landes a manuscript signed with an unknown name, *De l'influence des tarifs français et anglais sur l'avenir des deux peuples*. The article appeared October 1844, and excited a good deal of attention. The author was asked for more; and the file of *Sophismes Economiques* commenced, to the joy of the opponents, and the confusion of the defenders, of privilege. Nothing is more brilliant, nothing more *French*, in the best sense of the word, than these amusing pamphlets, in which the most delicate irony and the most pitiless logic are combined, as in the famous *Pétition des fabricants de chandelles, bougies, lampes, chandeliers, reverbères, mouchettes, éteignoirs, et des producteurs de suif, huile résine, alcool, et généralement de tout ce qui concerne l'éclairage*. This petition of the candle makers is a humorous complaint against the sun for spoiling their trade, a petition based on protectionist lines. "We demand," say the petitioners at the close of their arguments,

"Qu'il vous plaise de faire une loi qui ordonne la fermeture de toutes fenêtres, lucarnes, abat-jour, contre-vents, volets, rideaux, vasistas, œils-de-bœuf, stores, en un mot, de toutes ouvertures, trous, fentes et fissures par lesquelles la lumière du soleil a coutume de pénétrer dans les maisons, au préjudice des belles industries dont nous nous flattons d'avoir doté le pays, qui ne saurait sans ingratitude nous abandonner aujourd'hui à une lutte si inégale."

From a purely literary point of view several of these satires are first-rate. At this time Bastiat also wrote his first book, *Cobden et la Ligue ou l'agitation anglaise pour la liberté des échanges*, and finally left Mugron for Paris.

He soon became the most active and dreaded antagonist of the protectionist policy. The war tariffs of the first empire had been continued after the restoration by the monarchy of July (Louis Philippe). The first *Association pour la liberté des échanges* was formed at Bordeaux, February 1846; another was established at Paris the same year with Bastiat as general secretary, and *le Libre Échange* as its journal. This free-trade campaign was roughly interrupted by the revolution of 1848; and the French economists, and Bastiat among them, found themselves compelled to direct their efforts and their forces against the spread of socialism. Bastiat harassed those who followed Louis BLANC, Considérant, P. LEROUX, PROUDHON, with epigrams and refutations, and thus assisted in enlightening the country as to the perils with which the revolutionary UTOPIA threatened it, see *Propriété et Loi*, *Propriété et Spoliation*, *Justice et Fraternité*, etc. His conflict with PROUDHON (*q.v.*) on *La gratuité du crédit*, will always be considered one of the most brilliant passages of arms of French economic science at this critical epoch.

At the elections of August 1848, the department of the Landes returned Bastiat to the *Assemblée Constituante*, and May 1849 to the *Assemblée Législative*. Here he rarely spoke. He did not possess the physical qualifications of an orator, and the extraordinary exertions he had imposed on himself since he moved to Paris completed the ruin of his health, previously much shattered. After having victoriously refuted the errors of protection and socialism, he thought it was time for him to formulate what he considered the true economic doctrine, and commenced the publication of his *Harmonies*. In this brilliant work, unhappily never finished, Bastiat shows the contrast between the internal weakness of the artificial organisations which are founded on constraint, and the prosperity spontaneously arising in an economic condition

in which the equilibrium of individual and collective forces results from their free and reciprocal balance. This is the fundamental thought (*idée mère*) on which the *Harmonies Economiques* are based, and granted this as a philosophic basis, it could not have been developed with more skill. Some of Bastiat's opinions have been criticised—notably his theory of value—and he may also be complained of as being too much of an optimist. But for all that no one has succeeded better in making his readers admire the science which he himself loved so well. Political economy has been indebted to him, both during his short life and after it, for some of its worthiest followers. The first volume only of his *Harmonies* had been published when Bastiat, wearied and worn out, sought rest in Italy. He died in Rome 24th December 1850, as a Christian; his last words were *la vérité*.

[For life of Bastiat, see speech on the occasion of the inauguration of monument at Mugron by M. Léon Say, 1878. Notices by MM. R. de Fontenay,—F. Passy,—Paillottet,—De Molinari,—Paul Gardelle,—Baunard,—De Foville,—A. Courtois fils. Madame Cheuvreux published, 1870, part of the correspondence of Bastiat, *Lettres d'un habitant des Landes.*] A. de F.

BASTIAT AS A THEORIST. The *Harmonies* of Bastiat have not been re-echoed by economists with one accord. According to CAIRNES (*Fortnightly Review*, 1870), "all that is peculiar to his scheme of speculation" rests on his doctrine of *service*; "and, this failing, the entire fabric inevitably collapses." By "the shifting uses of an ambiguous term" Bastiat confounds what RICARDO and others had distinguished: cases where value is, and is not, proportioned to efforts and sacrifices (see DIFFICULTY OF ATTAINMENT). Value in all cases, according to Bastiat, represents service. "Such a generalisation," says Cairnes, "is no generalisation in the scientific sense of the term; it is a mere confounding of unanalysed phenomena under an ambiguous word." Describing all commercial transactions as a reciprocity of services, Bastiat attempted not only to explain, but to justify the existing *régime*, and failed in both attempts, which he never ought to have combined (*Fortnightly Review*, vol. viii. p. 426, *et seq.*) Dr. Sidgwick in the third book of his *Principles of Political Economy*, has afforded the most complete refutation of the economic optimists, "of whom Bastiat may be taken as a type" (*ibid.* ch. ii. § 1). Professor Marshall says of Bastiat; "the lucidity of his style caused him to have great vogue; but he really understood economic science, in the name of which he professed to write, hardly better than did the socialists themselves" (*Principles of Economics*, bk. i. ch. iv. § 6, n. 2). COURNOT also should be referred to among the profound and unbiassed thinkers who have exposed the unscientific character of economic optimism (*Principes de la théorie des Richesses*, 1863, livre iv. *l'optimisme economique*, Cp. *Revue Sommaire*, 1874). A less temperate criticism of Bastiat's theories may be read with amusement in LASSALLE'S *Herr Bastiat-Schulze von Delitzsch . . . oder Capital und Arbeit* (1864); addressed to SCHULZE-DELITZSCH, but striking through him at Bastiat. Lassalle fastens on the weak point, the theory of services, and, with much humour and more insolence, proves it to be "no economic category" (p. 132, *et seq.*) but rather an "economic enormity without parallel"—"Yet this is the only new thing which that clever windbag (*geistreiche blagueur*) has said in his primer (*fibel*)."

Severe as are these judgments, and in one case at least exaggerated, they cannot be wholly set aside. But the opinion that Bastiat did not make any considerable contribution to abstract theory is not inconsistent with gratitude to him for having popularised (in the best sense of the term) the discoveries of his predecessors. It is admitted that in the exposure of economic fallacies Bastiat is unrivalled. The same Cairnes who judges the *Harmonies* so severely calls Bastiat to his aid when he is combating economic sophisms (*Leading Principles*, pt. ii. ch. ii.)

[See, in addition to the authors who have been mentioned as critics of Bastiat, Böhm-Bawerk, *Geschichte und Kritik der Zinsentheorien* (1884).] F. Y. E.

BATBIE, ANSELME POLYCARPE, born at Seyssan (Gers) 1828, died at Paris 1887. He entered the *Conseil d'état* in 1849, but left it at the *coup d'état* of 2d December 1851, to give himself up to teaching. It was not long before he became first supplementary professor 1857, then full professor, 1862, at the École de Droit at Paris, in "Droit administratif" and "Économie Politique." Elected deputy to the *Assemblée Nationale* in 1871, he found his place among the monarchists, and was one of the foremost opponents of the republican form of government. It was he who invented the phrase the *Gouvernement de combat*, a *mot* which had a great success. In 1875 he was elected a permanent senator. The delicacy of his mode of thought would always have held him back from becoming the champion of the reactionary party.

Besides his works on law, of which the most important is his *Traité théorique et pratique de droit public et administratif* (7 vols. in 8vo, 1862-66), we may mention his economic works, *Le crédit populaire* (1864, 1 vol. in 18mo)—*Turgot, Philosophe, Economiste, et Administrateur* (1 vol. in 8vo, 1866) (couronné by the Institut),—*Nouveau cours d'économie politique*, 1866 (2 vols. in 8vo),—and finally *Mélanges d'économie politique* (*Mémoire sur le prêt à intérêt*, couronné by the Institut, and *Mémoire sur l'impôt avant et après*, 1789-1861, 1 vol. in 8vo). A. C. f.

BATE'S CASE, OR THE CASE OF IMPOSITIONS. The right of the crown to levy customs duties without the consent of parliament had been abolished—at all events in the case of wool—by a statute of 1362, and had not been revived until the 16th century. Mary and Elizabeth had both imposed small duties on articles of commerce, but this had been done with the consent of the merchants, and had attracted no attention. It was reserved for James I., relying upon the subservience of the judges, to make arbitrary customs an important source of revenue. TONNAGE and POUNDAGE, which had been granted for life to every king since Henry V., included a duty of 2s. 6d. per cwt. of currants. James by his own authority imposed another 5s., and thus trebled the duty. John Bate, a merchant of the LEVANT Co., refused to pay, on the ground that the tax could only lawfully be imposed by parliament. The case was brought before the exchequer court, and the decision of the judges is an important illustration of the legal theories of the Stuart period. They declared that the king's power is of two kinds, ordinary and absolute. His ordinary power is exercised in the interest of individuals, and is limited by common and statute law. His absolute power, on the other hand, is exercised for the welfare of the whole state, and is not so limited. Customs are the effect of commerce; but commerce and all foreign relations, such as war and peace, belong to the king's absolute power. He who has power over the cause has power also over the effect. The seaports are the king's gates, which he can open or shut as he pleases. Hence the customs are subject to the king's absolute power, and can be levied or increased at his will. This decision was acquiesced in at the moment, and enabled James to issue a BOOK OF RATES in 1608. In 1610 parliament took the matter up, and protested against the claim to levy impositions without consent. But they failed to carry their bill on the subject, and the decision in Bate's case continued to be legally valid until all arbitrary taxation was swept away by the Long Parliament.

[*State Trials*, vol. ii.—Gardiner, *History of England*, vol. ii.—Hallam, *Constitutional History*, vol. i.] H. L.

BAUDEAU, NICOLAS, Abbé, born at Amboise in 1730, died, out of his mind, it is believed, about 1792. He gave up his ecclesiastic status to establish, at the end of 1765, the *Ephémérides du citoyen ou chronique de l'esprit national*, a periodical opposed at first to the party of the Economists; but which, by a conversion most honourable to Baudeau, became, after 1766, the most accredited organ of the PHYSIOCRATS. For example, the cause of humanity, and the abolition of negro slavery, were pleaded by him with great warmth. He even invented, to keep these all together, the word HUMANISME. It was not long before he altered the sub-title of his journal to that of *Bibliothèque raisonnée des sciences morales et politiques*. On accepting a canonry in Poland, he handed over, May 1768, to DU PONT (De Nemours) the chief editorship of his review, which was suppressed by order in 1772 (69 vols. in 12mo had appeared). Returning to France, he brought his review out under the title of *Ephémérides économiques ou Bibliothèque raisonnée de l'histoire, de la morale et de la politique* (19 numbers in 12mo, from December 1773 to June 1776). His principal work, was the *Première introduction à la philosophie économique ou analyse des états policés*, in which he refuted brilliantly the Abbé GALIANI (1771, in 8vo, inserted in the collection of the principal economists published by Guillaumin). This secured him a high place among the economists of the school of the Physiocrats. His restless spirit, his changeable disposition, and the want of financial order in his private affairs, brought on him criticisms sometimes not undeserved.

A. C. f.

BAUDI, CARLO, di Vesme, was the author of one of the best books on the history of landed property in Italy from the fall of the Roman empire up to the establishment of feudalism. (*Vicende della proprietà in Italia dalla caduta dell' impero romano allo stabilimento dei feudi*, 1836, Torino). The academy of Turin honoured this work by a prize. Baudi di Vesme also gained a prize from the Académie des Inscriptions et Belles Lettres for a book on the question of taxation in France under the first two dynasties: *Tributi nelle Gallie durante le due prime dinastie*. He edited the *Laws of the Longobards*, and wrote a book on the political and economical condition of Sardinia: *Considerazioni politiche ed economiche sulla Sardegna*.

Baudi was born at Cuneo 1809, and died 1877. He was educated by the Jesuits, and became famous as a Latin and Greek scholar. In 1837 he was made a member of the Academy of Turin, and in 1850 a senator. M. P.

BAUMSTARK, EDWARD (1807-1889), an eminent German economist, born at Sinzheim, became privat-docent in cameral science at Heidelberg in 1823, was appointed professor at Greifswald in 1843, and the same year was made director of the economic academy at Eldena. He was Geheimer Regierungsrath, and sat in the Prussian Herrenhaus, acting in politics with the national liberal party. He died 8th April 1889. The earlier of his two principal economic writings, *Staatswissenschaftliche Versüche über Staatskredit, Staatsschulden, und Staatspapiere*, 1833, is founded mainly on the *Oeffentliche Credit* of NEBENIUS, but contains some independent investigations. His most valuable work was his excellent translation of RICARDO'S *Principles—David Ricardo's Grund-*

gesetze der Volkswirthschaft und Besteuerung übersetzt und erläutert, 1838, which first made that writer's doctrines generally known in Germany. Though strongly influenced by the abstract method of his English master, he recognised his inferiority to Adam Smith, and saw the importance of the historical direction in economic studies. He gave explanations on profit, rent, price, taxes, paper money, and public debts, which contributed to the right understanding of Ricardo; improved the language in which his doctrines had been stated, and corrected the exaggerations of his followers. In 1835 he published a *Cameralistiche Encyclopädie*, which took rank as an instructive work for the use of German officials. He was also author of a treatise *Zur Einkommensteuerfrage*, 1860.

[Roscher, *Nat. Oek. in Deutschland*, p. 909.]

J. K. I.

BAXTER, Robert Dudley, an eminent statistician, was born in Doncaster 1827, and died at Hampstead 1875. He belonged to the well-known legal firm of Baxters & Co. He combined in a remarkable degree the pursuits of business and literature, the character of a man of science and a love of poetry. His energy in obtaining and classifying information was unbounded, as well as the goodwill with which he imparted it to others.

Baxter's statistical work may be divided into two classes (*a*) economical, and (*b*) political.

(*a*) To the first class belong—(1) *The Budget and the Income Tax*, 1860. (2) *Railway Extension and its results*, 1866—read before the Statistical Society, Dec. 1866, and afterwards published separately; it contains statistics of the growth and distribution of railways, a statement of their cost and estimate of their benefit, both for the United Kingdom and other countries. (3) *The National Income*, 1868—the income of the United Kingdom is estimated as £814,119,000; divided by "the equatorial line of British income," £100 in two nearly equal portions, accruing respectively to those who have more or less than that annual sum. Baxter's estimate of the amount of income which is derived from capital is approved by Sir R. Giffen with some reservation (*Essay in Finance*, series 1; Essay on *Recent Accumulation*, pp. 166-170). The distinction which Baxter makes between productive and unproductive (ch. viii.), "the income that is an original and fresh contribution to the common stock from that which is merely derived from the first," requires consideration (cp. Leone Levi, *Wages and Earnings of the Working Classes, Reports of the British Association*, 1881, p. 275, and 1882, p. 299). (4) *The Foreign Cattle Market Bill*, 1869. (5) *The Taxation of the United Kingdom*. After a clear statement of the amount of taxation, the writer estimates its distribution and pressure. He pronounces on many delicate economic questions, *e.g.* "Railways and public carriages are obliged to a great extent themselves to bear the contributions levied from them, from the existence of maximum charges limited by law or by the public capacity of paying." He maintains that taxes on property do *not* become rent charges, and disputes Mill's principle of taxing unearned increment of rent. He settles what proportion of the rates on land and houses are borne by landlord and tenant respectively. He finds that the pressure of taxation on the manual labour classes (eight and a half per cent of workmen's earnings) is heavy in proportion to the taxation of the larger industrial incomes of the upper and middle classes (eight per cent). To estimate the pressure of taxation on the working classes he collected budgets of family expenditure (see Workmen's Budgets). Attention should also be called to his estimate of the property of the United Kingdom (in 1869) £6,000,000,000. (6) *National Debts of the World*, 1871. Measured in four ways by: (1) nominal capital; (2) interest actually paid; (3) annual charge per head of population; (4) proportion of annual charge to gross income. The last, which is the most correct method, makes the burden in 1870 hardly greater than in 1700, and less than in 1712. The progress of the indebtedness of the world as compared with the United Kingdom is shown by the statement that, while in 1848 our debt was nearly half, in 1870 it is just a fifth of the total debt of the world. Absolutely, the debt of the United Kingdom was reduced slightly between 1848 and 1870. In respect of the burden of debt there appears a remarkable equality between the United Kingdom and several of her great contemporaries.

The subject is brought down to a later date in (7) "Recent Progress of National Debts," 1874 (*Journal of the Statistical Society*). (8) *Local Government and Taxation*, 1874; containing a criticism of Goschen's report on the increase of local taxation.

(*b*) The rest of Baxter's statistical writings are rather political than economical.

(1) *The Volunteer Movement*, 1860. (2) *The New Reform Bill; the Franchise Returns*, etc., 1866. (3) *The Redistribution of Seats and the Counties*, 1866 [with which should be read letters to the *Times* on cognate subjects in the same and the following year]. (4) *Results of the General Election of* 1868, 1869. (5) *History of English Parties and Conservatism*, 1870. (6) *The Political Progress of the Working Classes*, 1871.

[A beautiful picture of Baxter's simple life and a useful analysis of his elaborate works are given in *In Memoriam R. D. Baxter*, by his widow.]

F. Y. E.

BAZAAR. A Persian word meaning a market. In this sense it is employed in India, Turkey, and other eastern countries. In Great Britain the signification of the word has been

corrupted, implying either a collection of shops for the retailing of fancy goods or the temporary opening by amateurs of some place for the sale of such goods and for amusement, mostly for the benefit of a charity. We need only consider the term in the sense in which it is used in the East. There every town of magnitude is possessed of its bazaar, which is the centre of mercantile life, where business both wholesale and retail is transacted, and where news is circulated. The bazaar quarter of the town, is often a collection of streets with shops entirely distinct which constitute the bazaar, while in other cases a square is devoted to the use of the merchants and dealers. A very large amount of business is carried on through the medium of bazaars; and they are a recognised institution of oriental life.

BAZARD, Saint-Amand, born at Paris 1791, died at Courtry near Montfermeil, 1832. He was one of the three founders of the society of the Carbonari (*q.v.*) in France (1821), and joined in the active work of the Saint-Simonians after the death of Saint Simon, whom he had never seen. He held an important position as editor of the *Producteur* (1825-26), of the *Organisateur* (second of that name, 1828-30), and of the *Globe* (1831). With Enfantin he became the centre of the Saint-Simonian religion; but before long the opinions of Enfantin, particularly on the state of "Woman in the Family," caused him to leave it (January 1832). To explain why he did this he published a pamphlet called *Discussions morales, politiques et religieuses*, January 1832. A. C. f.

BEAR. Under Backwardation the position of a seller who is unable to deliver according to contract has been shown. A Bear is a seller in blank, and from settlement to settlement he must borrow stock on the best terms which he can make in order to arrange the Continuation (*q.v.*) of his contract. The word, no doubt, arose from the belief that one who sells in anticipation of lower prices is a desponding, pessimistic, and misanthropic person, but it has been so long in use that there is no certain knowledge of its derivation. In America one who sells as a Bear of stock is said to be "selling short." The simple adjective "bare" may be the origin of the expression, as, when the time of settlement comes, the Bear seller is bare or short of the security which he has contracted to deliver. When he has "bought back," he is said to have "closed" his "bear." A. E.

BEARER. *Bonds to bearer*, and sometimes shares, are those which are negotiable instruments on their face. Bearer securities are distinguished, on the stock exchange, from registered securities inasmuch as the title of the former passes from holder to holder, while there is no legal title to a registered share until the owner has had his name placed on the register of the company in which he has acquired a share or shares (see Commercial Instrument). A. E.

BECCARIA, Cesare Bonesana (Marquis) born 1735, at Milan, was brought up in a Jesuit college at Parma. Through his interest in different sciences and the circumstances of his life he was led to try his hand at very different subjects, and succeeded marvellously in every one of them. An able mathematician, he wrote a noteworthy treatise on the "nature of style," being an analysis of the principles of æsthetics applied to one of the branches of fine arts (Milan, 1770 vol. i.; the second volume never appeared). He belonged for twenty-five years to the highest magistracy, publishing for the Austrian government excellent reports on corn stores, on the reform of coinage, on measures and weights (proposing a Metric System based on astronomical magnitudes and physical properties, 1780) on demographical questions, etc., marked by great lucidity and precision and full of ideas ahead of his times. His famous little pamphlet, *Dei delitti e delle pene*, published in 1764, has been translated into twenty-two languages. In 1768 a chair of political economy was founded for him by the Austrian government in Milan (the second chair for this science founded in Italy; the first was founded in 1755 in Naples by Bartolomeo Intieri for Genovesi), and he occupied it for two years. He died in 1793 without having published his lectures, which were first published in 1804 by Custodi, and certainly are very remarkable considering they were written before A. Smith's *Wealth of Nations*. Beccaria treats political economy as an art to maximise the value of the produce of work, regarding labourers as engines whose *duty* has to be maximised. From this principle he deduces the necessity of a division of labour, a determination of the value of a labourer, and the nature and function of capital. His lectures are also remarkable for an exposition of the laws of growth of population in relation to subsistence, now known as Malthus's theory. Beccaria, however, is not correct, according to our present standard, in sundry other questions, allowing himself to be misled by the prevailing French school, and is in this respect inferior to his friend Verri. A special mention must be made of a quite small pamphlet Beccaria wrote in a newspaper (*il Caffè*) in 1764 or 1765, under the title, *Algebraical Essay on Smuggling*, in which he solves analytically the problem, "How much of a given quantity of merchandise must merchants smuggle, so as not to be winners or losers, although the remaining portion of the merchandise be confiscated?"

The expression, popularised through Beccaria's influence, "the greatest happiness of the greatest number" (*la massima felicità divisa nel maggior numero*, Preface of treatise, *Dei delitti e delle pene*) is one of those phrases which have penetrated so

deep into the mind of civilised man that some further observations on its origin are advisable. Beccaria says, § 2 of his treatise *Dei delitti e delle pene* (1764), that coldly (rigidly) examining human nature we see that every man is absolutely *egoistic*, and that on this basis alone legislation can be established, *if it is not to be knocked over constantly*. That nobody cares anything for the universal happiness, or for the good of others, and that "ogni uomo si fa centro di tutte le combinazioni del globo," every man makes himself the centre of all the things that happen in the world. The principle which Beccaria announces may have been suggested to him by his friend Verri, who had written a special treatise on the *Nature of Pleasure and Pain*. Italian economists, contemporary with Verri, were apparently led to give great attention to this subject through the book of De Maupertuis on *Le principe de la moindre action*. They were also greatly influenced by HELVETIUS, who says, *Traité de l'esprit* (1759), vol. i. div. ii. ch. ii. "that the principle of *interest* is for the moral world, what the principle of *gravitation* is for the physical one." The general idea is found earlier than the writers cited (*e.g.* in Fr. HUTCHESON'S *Inquiry* (1738), but it is of interest to trace the channel through which it reached English economists (see BENTHAM). M. P.

BECHER, JOHANN JOACHIM (1625 ?-1685), was the principal representative of Austrian political economy under Leopold I. He was born at Speyer, probably in 1625; he was son of a Protestant minister, but, whilst still young, became a Roman Catholic. He was medical professor and court physician at Mainz. He afterwards removed to Würzburg and Munich, and in 1666 to Vienna, where he was employed in the newly established Commerz-Collegium. He was much busied in the foundation of East and West Indian trading companies, the introduction of foreign branches of industry, and the negotiation of Austrian loans in Holland. Overwhelmed with debt, he fled in 1678 to Holland, whence he passed in 1680 to England, where he died in 1685, having probably again become a Protestant. LEIBNITZ describes him as "un esprit excellent," "Vir summo ingenio," but as morally worthless, insolent, vain, and mendacious. There was in him a large element of the charlatan, but he had great ingenuity, activity of mind, and fertility of invention. He was the originator of potato cultivation in Germany. His *Physica Subterranea* contains the fundamental ideas of the phlogistic system of chemistry; Stahl admitted his obligations to it, and pronounced it to be "opus sine pari, primum hactenus et princeps." His principal economic work was his *Politischer Discurs von den eigentlichen Ursachen des Auf- und Abnehmen der Reiche, Städte und Republiken*, in specie *wie ein Land nahrhaft und folkreich zu machen und in eine rechte* Societatem civilem *zu bringen*, 1668. It is written in the spirit of the mercantile system, but avoids some of the exaggerations of that system, and shows occasional insight into juster principles. As ROSCHER remarks, most of the German economists who preceded him had been theologians, philologists, or jurists; he was a student of natural philosophy, and this gives to his writings a special freshness, a freedom from pedantry, and a practical character, which, with his lively and striking style, fitted them to exercise a popular influence, as they in fact did, both directly and still more through his disciple HÖRNECK.

[Roscher, *Gesch. der Nat. Oek. in Deutschland*, p. 270.] J. K. I.

BECKMANN, JOHANN (1739-1811). Beckmann, a native of Hoya in Hanover, became professor of philosophy 1766, and then (from 1770 till his death) of national economy at Göttingen, in his native country. Under Beckmann, SCHLÖZER, and others, Göttingen became the leading university at that date for the social and political sciences. Beckmann has claims to be regarded as the founder of scientific technology, and he had a wide knowledge of the industries, arts, and sciences. Linnæus was among his friends. He wrote on commerce, agriculture, botany, finance, bookkeeping, technology, etc., but the work which has been of most use to economists is his history of inventions, *Beiträge zur Geschichte der Erfindungen* (in five volumes) (1780-1805), part of a series of "Beiträge zur Oekonomie, Technologie, Polizei — und Kameralwissenschaften." The *History of Inventions* has been translated into English, and is included in Bohn's Standard Library; prefixed to that translation there is a good biography.

[For a general list of works, see Professor Elster's article "Beckmann" in the new *Handwörterbuch der Staatswissenschaften*. For criticism, see Roscher, *Geschichte der National-Oekonomik in Deutschland* (1874), p. 912 and note; cp. 582 note.] J. B.

BEDE (see MANOR). A German term for certain exactions paid to the feudal lord by those of his tenants who did not hold by military tenure, or who were not ecclesiastics. Originally payable in kind and determined only by the will of the lord, in most parts of Germany by the 13th century the Bede had become a fixed money payment. This quit rent continued in existence for a long period, and in some parts of Germany was not disused even in the present century. In some cases the rent was paid to another person than the owner of the land, forming thus a kind of rent-charge.

The Bede seems to be analogous to the "redditus assisus" or fixed quit rents formerly paid by manorial tenants in England. But it differs from this in the fact that it could not be exacted from military tenants, and in other ways. It is also analogous to the French TAILLE but has no connection with any system of taxation. As its name implies,—*bede*, a request, a prayer—it is a BENEVOLENCE extracted from the tenants by their feudal chief. Compare the old

English words "bederipe," a day's reaping due from the tenants at the lord's request, boonerth, a day's ploughing, boon-days, a day's labour, and the Latin phrases "preces," PRECARIÆ. Conrad, *Handwörterbuch der Staatswissenschaften*, s.v. 1889. C. G. C.

BEEKE, REV. HENRY, born at Kingsteignton, Devonshire, 6th January 1751, educated at Cambridge, where he proceeded M.A. 1776; D.D. 1800. He was professor of modern history in 1801, Dean of Bristol, 1814; and died 1837 (see ARITHMETIC, POLITICAL. HISTORY OF).

Observations on the Produce of the Income Tax, pt. i., London, 1799, 8vo; new and corrected edition, with additions, London, 1800, 8vo (an able defence of the tax, showing the economic state of Great Britain at the time. An appreciative account of Beeke's work is given by GIFFEN in his *Growth of Capital*, 1890). H. R. T.

BELDAM, reputed author of *Considerations on Money, Bullion, and Foreign Exchanges; being an Inquiry into the present state of the British Coinage, particularly with regard to the scarcity of Silver Money, with a view to point out the most probable means of making it plentiful* (London, 1772).

[*Monthly Review*, 1772, vol. xlvi. p. 243. See also Jevons's *Currency and Finance*, p. 368.] F. Y. E.

BELL, WILLIAM (1731-1816), prebendary of Westminster and treasurer of St. Paul's, was a fellow of Magdalene College (Cambridge); here he obtained one of Lord Townshend's prizes by the work which entitles him to be considered as an economist—A dissertation on the following subject: *What Causes principally contribute to render a Nation Populous? And what Effect has the Populousness of a Nation on its Trade?* 1756. In 1751 HUME had maintained, in opposition to MONTESQUIEU (*Lettres Persanes* cxii.-cxxiii. and *Esprit des loix*, l. xxiii. chs. 17-29), the superior populousness of the modern world (see Hume's *Essay on the Populousness of Ancient Nations, and Philosophical Works*, vol. iii. p. 56, ed. Greene and Grose). In this Hume had been criticised by R. WALLACE (1753), who asserted that modern arts and institutions tended to diminish population. Bell has probably been inspired by this writer. Commerce and the arts have, according to him, a tendency to diminish population, for there are not "any bounds originally prescribed to humane nature" (p. 2). They divert production from being employed upon the necessaries of life; make, through the influx of money, the prices of provisions high, and render the support of families difficult; whereas agriculture and the more useful arts, by lowering prices, must cause a fall of wages, but in what proportion the author holds to be "an idle and useless curiosity" (p. 19). To secure agriculture and the more necessary employments, Bell thinks that "of all political institutions none seems more immediately requisite . . . than an equal division of lands" (p. 24). He proposes, therefore, that the right of PRIMOGENITURE should be abolished and a more equal division established between all the children of a family" (p. 28). He recommends a republican form of government, as most favourable to the increase of population (p. 29). Only after a considerable increase thereof should commerce be introduced. This dissertation has been assailed by William TEMPLE, a clothier of Trowbridge, in *A Vindication of Commerce and the Arts*, by J—— B——, M.D., London, 1758. It was translated into German under the title: *Wilhelm Bells, M.A. zu Cambridge, gekrönte Preisschrift von den Quellen und Folgen einer starken Bevölkerung*, 1762, and Vienna, 1768.

[M'Culloch's *Literature*, pp. 51, 52.—*Dictionary of National Biography*, vol. iv. pp. 176, 177.—Macleod's *Dictionary of Political Economy*, p. 260. The *Vindication* is erroneously ascribed to Bell.] S. B.

BELLERS, JOHN, member of the Society of Friends, born about 1654, became joint-lord of the manor of Coln St. Aldwyn's, Gloucestershire, and devoted himself to philanthropic projects, in some of which he anticipated John HOWARD. Died in London, 8th February 1725. Among his numerous pamphlets are—

Proposals for Raising a Colledge of Industry, London, 1695 and 1696, 4to (the rich are to provide the capital and derive profit from the college, in which destitute men and women are to find work, and a resort in old age or illness; reprinted in R. Owen's *New View of Society*, 1818; see also Eden's *State of the Poor*, i. p. 264 etc.; K. Marx's *Das Kapital*, and H. M. Hyndman's *Socialism in England*, 1888, p. 65 etc.)—*Essays about the Poor, Manufactures, Trade, etc.*, London, 1699, 4to.—*An Essay for Employing the Poor to Profit*, London, 1723, 4to. H. R. T.

BELLITTI, GIACINTO, author of *Considerazioni sulla libertà dell' annona e sull' abolizione della assisa del pesce*, Napoli, 1791, strenuously defends free trade, much in the same way as CANTALUPO (*q.v.*) ("Domenico di Gennaro, duca di Cantalupo") had done in 1785 in his *Annona*. M. P.

BELLONI, GIROLAMO, was a Roman banker who wrote, in 1750, an *Essay on Commerce* (*Dissertazione sopra il Commercio*) which had an extraordinary success. It was translated into several languages (including English, London, 1752), and the pope Benedict XIV. (Lambertini) made the author a marquis for it. In 1757 a second Italian edition appeared, and in the same year a *Letter on Imaginary Money*. In the *Essay on Commerce* Belloni does not show himself possessed of any superiority over economists who were his predecessors, like LOCKE, MELON, BROGGIA and GALIANI, and his great success is the more difficult to understand as his book is not free from some very gross errors, which even in his time ought to have been avoided by an acute and learned writer.

An example of such errors is his approval of measures tending to prohibit the exportation of coin. His writings have been collected by CUSTODI in his *Raccolta degli Economisti classici italiani.* M. P.

BENEFICE (1). This term was applied during the Early Middle Ages to lands held of a person who retained the ownership by a tenant who enjoyed the usufruct. A tenure of this kind, revocable at the will of the owner, and known as a *precarium*, was occasionally to be found in the Roman republic. Under the empire it appears more frequently; and, where the conditions of the grant are light, it is naturally described as a *beneficium*. Under the Merovingian kings the tenure became still more common; partly owing to the action of the great ecclesiastical proprietors, who by grants of this kind to dependant tenants secured the cultivation of their estates; partly owing to the surrender of their lands by the weak to the more powerful on condition of being allowed to retain the usufruct. The usual condition of a *beneficium* was a periodical payment in money or in kind; it was not associated with military service until the 8th century. At first revocable at will, and then granted only for a short term of years, by the middle of the 9th century *beneficia* had come to be regarded as hereditary. By that time, also, the beneficiary tenure had become the almost universal form of land-holding by persons above the rank of VILLEIN; a change which was largely due to the action of Charles Martel and the early Carlovingian princes, who forced the ecclesiastical proprietors to give up large portions of their estates to secular hands, while allowing them to retain the nominal ownership. The conjunction of the beneficial system with the vassal relation—with which originally it had nothing to do—ultimately created feudal tenure, such as it was to be found in the greater part of western Europe.

[The clearest account of the early history of *precaria* and *beneficia* is by Fustel de Coulanges, "Les Origines du Régime Féodal" in *Revue des Deux Mondes* for 15th May 1873. On the Merovingian and Carlovingian *beneficium*, the standard works are those of Georg Waitz, *Deutsche Verfassungsgeschichte*, vol. ii. (2d ed. 1870), vol. iv. (2d ed. 1885), and Paul Roth, *Geschichte des Beneficialwesens* (1850), and *Feudalität und Unterthanenverband* (1863), who, however, differ in important points. For brief summaries, see Stubbs, *Const. Hist. Engl.*, vol. ch. ix.; and Felix Dahn, *Deutsche Geschichte* (1888), bk. v. ch. vi.] W. J. A.

BENEFICE (2). An ecclesiastical living or promotion. The word *beneficium* was applied to portions of land granted by a feudal lord to his followers (see BENEFICE No. 1), but afterwards it came to be restricted in a general sense to church preferments and dignities, and in a narrower sense to rectories, vicarages, and perpetual curacies, which were endowed with lands and tithes. The perpetual right of presentation to a benefice is called an advowson and is regarded as a hereditament of an incorporeal nature. The right of next presentation is only personal property. No one but a priest can hold a benefice, and benefices to which the cure of souls is attached cannot be charged with payments to other persons.

[*The Ecclesiastical Law of the Church of England*, by Sir R. Phillimore, London, 1873.] J. E. C. M.

BENEFICIUM CEDENDARUM ACTIONUM (Scots law term). Right of co-surety to sue for contribution.

BENEFICIUM COMPETENTIÆ. A privilege given by the Roman law to defendants in actions brought by plaintiffs standing in certain relations to them (*e.g.* to fathers in actions brought by their children, to former masters in actions brought by freedmen, etc.) If a defendant availed himself of this privilege, judgment was not given for the amount of the claim, but for such sum as the defendant might be able to pay without depriving himself of the necessaries of life. E. S.

BENEFICIUM DIVISIONIS (Scots law). An implied right of a surety to be sued in the first place only for his share.

BENEFICIUM EXCUSSIONIS. A privilege given to sureties in the later Roman law, which enabled them to postpone the payment of the guaranteed debt until the principal debtor had been sued for the amount. E. S.

BENEFICIUM INVENTARII. By the civil law, the property of a deceased person goes to one or more persons who have to pay all legacies and debts, and who, after once having accepted the inheritance, cannot plead insufficient assets, but are personally liable for everything. A person taking an inheritance in this way is called an heir (*heres*) (but it must be remembered that the word "heir" in English law has a totally different meaning). Justinian introduced the *beneficium inventarii* which enables the heir to have an official inventory of the estate made before he accepts the inheritance; when this is done the inheritance is said to be accepted "with benefit of inventory," and the heir is answerable to the extent of the assets only. The rules of law here described are still in force in the countries whose laws are based on the civil law (see for instance the French *Code Civil*, art. 793). E. S.

BENEVOLENCES. Voluntary grants made to the king on application by him personally, or by letter, or through commissioners. They were first exacted by Edward IV. Though they were declared illegal by 1 Ric. III. c. 2, Henry VII. resorted to them in 1491 and obtained an act (2 Henry VII. c. 10) for the recovery of all sums promised but not paid.

Henry VIII. demanded benevolences in 1528 and 1545, and many sums were given to Elizabeth. During the struggle between the Stuarts and parliament, the crown more than once resorted to this method of raising money. The Petition of Right (1627) expressly declared that no man should be liable to any benevolence or forced loan. J. E. C. M.

[Dowell's *History of Taxation and Taxes in England* (London, 1889).—*Constitutional Law*, by H. Broom, p. 398 (London, 1885).—2 *State Trials*, 899.—12 Coke, *Reports*, 119.]

BENTHAM, JEREMY, philosopher, reformer, and economist, born at Houndsditch, London, 1748, was trained for the bar, but soon abandoned it for a life of study and travel, which a considerable private fortune made possible. Most of his voluminous works were first published in French by his friend and admirer Dumont. Bentham died at Westminster 1832, in his eighty-fifth year.

Bentham deserves a place in the history of political economy, partly from his writings on that subject, perhaps even more from the influence of his philosophy on his friends James MILL and David RICARDO. His first important economical work, the *Defence of Usury*, is a series of lively letters (written from Russia in 1787), in which he appeals to Adam Smith to apply his principles consistently, and withdraw his sanction from "legal restraints on pecuniary bargains." He contends that no man should be forbidden to make his own terms in a bargain relating to money, any more than in any other bargains. He tries to prove, by closely reasoned arguments, that, when the legislature fixes a maximum rate of interest, it does not benefit the right persons, while it corrupts the public by multiplying temptations to law-breaking. He proceeds on the general principle that every man is the best judge of his own interest, and it is for the public good that he should be left free to seek it. Bentham was one of the first economical writers who were completely emancipated from the old prejudices against lending of money at interest; and he combats not only the old arguments against usury, but Adam Smith's special plea that, without a legal maximum, money would pass from the sober people to the prodigals and projectors. The prodigals, said Bentham, would not get it, and the projectors ought to get it. As Adam Smith himself has frequently remarked, all industrial progress depends on the formation of new industrial schemes, or in other words, on the work of projectors. In hindering projectors, therefore, we are hindering the public good. So argued Bentham; and Adam Smith is said to have confessed (before his death, in 1790) that in this point the disciple had bettered the instruction of his master. Both in style and in matter this is one of the most masterly of Bentham's economical writings. The praise, however, must be shared with the *Protest against Law Taxes* (1795), and the *Observations on the Poor Bill of Mr. Pitt*. In the latter, written 1797, he marshals a list of objections expressed in his happiest manner, and acknowledged by PITT to be (in conjunction with the *Essay* of MALTHUS) completely fatal to the success of his bill. The relief of the poor became an object of his thorough and dispassionate investigation, and as a result he submitted to government an elaborate poor-law scheme which anticipated many features of the law of 1834, and was within an ace of being accepted. Bentham was quick to see the affinity of the new economical doctrines of Adam SMITH with his own political philosophy. Even in his economical writings he is evidently more guided by his utilitarian conception of law and government than by purely economical reasons; but he finds the two in harmony with each other; and, in those important cases where political economy is inseparable from politics and legislation, he is original only in the sense of being a very intelligent disciple. His own constructive (as opposed to his critical) work in political economy is most fully presented in the *Manual of Political Economy*. Dumont gave part of this to the world in the Geneva *Bibliothèque Britannique* as early as 1798, and rightly remarks (in his introductory letter there) that, unlike Adam Smith, Bentham is never the historian but always the legislator, and that he laid special stress on the limitation of labour by capital. Whether much or little labour is to be employed in any industry must depend on whether much or little capital is devoted to that industry. This was not a new idea, but it was made more prominent than in the *Wealth of Nations*, from which otherwise the *Manual* differs more in method than in doctrine. Political economy is treated as a science whereby much can be known, rather than as an art whereby government can do much for its citizens. The part of government is, as a rule, to "be quiet" and let self-interest have its perfect work, so that, out of the three classes of measures, the *sponte acta* by the citizens, the *agenda* by the state, and the *non agenda* by the state, the first, in economical matters, must play the largest part. In the *Manual*, indeed, the *non agenda* cover the greatest number of pages; the various forms of mischievous interference by government are described at length, and treated very much as by Adam Smith. They are, however, more plainly declared by Bentham (as later by COBDEN) to be not simply unwise, but unjust. Colonisation is regarded as a loss to the mother country and a gain to the world, a view which led Bentham, in his capacity of French citizen, to advise the French (in 1793) to emancipate their colonies. DRAWBACKS and BOUNTIES are condemned; but the granting of a patent to inventors is strongly commended, and the expense of procuring one is denounced as unjust.

In a passage, which does not appear in the *Bibliothèque Britannique*, and may have been written after Malthus's *Essay*, premiums on large families and similar encouragements of population are condemned: "As well make institutions to punish men for not eating, or pay them for eating, with premiums for them who eat most and oftenest." In regard to finance, Bentham considers that the best tax is the extension of escheats on failure of near relations (which is also the subject of a separate pamphlet), and the worst taxes are those on law proceedings. "In law a tax is a prohibition to every man who cannot pay the tax; this is understood in trade, but seems not to be understood in anything else," he says in his *Conversations*. He thinks well of the redemption of the national debt by an (inviolable) sinking fund, considering that the money employed in reducing the debt is, at the time of repayment, a positive addition to the productive capital of the country. This may be doubtful doctrine; but no exception can be taken to the main reason given for repayment, namely, that "sum for sum the enjoyment produced by gain is not equal to the suffering produced by loss. In this difference, traced through all its consequences, lies the mischief, and the sole mischief, of bankruptcy, or of theft." In dealing with special economical doctrines Bentham is not, on the whole, in advance of his master, while we miss, throughout, his master's continual illustrations from life and history. His distinctions are often expressed in philosophical terms, without thereby becoming either more subtle or more profound. National wealth, as the total of the means of subsistence or enjoyment, is distinguished from national opulence or "relative wealth," which varies inversely with population. He describes the "final cause" of wealth as well-being, and the "material cause" as "the matter of wealth considered in respect of its possessing or being capable of possessing *value*, *namely*, *subservience to well-being*, the final cause." (We may compare with this the casual remark in his *Conversations*, "the value of money is its quantity multiplied by the felicity it produces.") In regard to machinery, he seems to have arrived at a conclusion similar to Ricardo's in its final form. After an invention (he says in a passage which is not given in the *Bibliothèque Britannique*, and may be later than 1798): "Without an addition to the mass of pecuniary capital, which is a circumstance accidental and not belonging to the case, the retaining of the same number of hands would in no instance be possible, for the production and keeping up of the machinery or other auxiliary means would always require a considerable quantity of labour, the payment of which would be attended with a proportionable mass of expense, by which a proportionable part of the capital would be absorbed;" and therefore the introduction of machinery may certainly (he thinks) be an immediate evil to the labouring classes. Bentham can hardly, in this case, be said to give us both sides of the question. But there are other economical problems on which he barely touches at all. RENT is not discussed, and the distinction of cost from value is the subject only of passing allusion (in the *Conversations*). The assertion of Karl MARX that Bentham was the author of the theory of a wages fund rests on no stronger evidence than the passage above quoted about machinery. The statement that labour is limited by capital does not by itself imply so much. It is difficult to be certain how much of the *Manual* is of the 18th century and how much of later date; and we cannot give its author the credit of every novelty that distinguishes his treatise from the *Wealth of Nations*. But it is clear that Bentham, if not an economist of the first rank, was at least well abreast of the times.

But Bentham's political philosophy has exerted a much greater influence on political economy than his own directly economical writings. Through James Mill and Ricardo political economy came to be identified (not merely with utilitarianism, with which in some degree it had already been identified by Malthus), but with Bentham's peculiar form of utilitarianism. How closely the two were associated in the popular mind we may see from CARLYLE'S early writings, in which the monster "Utilitaria" and the "dismal science" are constantly presented as different phases of one and the same deadly error. "The greatest happiness of the greatest number," a neat democratic formula used by Beccaria in his *Treatise on Crimes and Punishments* (1764), and by Dr. Priestley[1] in the *Essay on Government* (1768), was announced by Bentham (in his *Fragment on Government*) in 1776 to be the ruling principle and chief end of the legislator; and the unhampered working of commercial ambition and competition was very easily translated into terms of this formula (see BECCARIA). Whatever distress free competition might inflict on individuals, it tended to the greatest happiness of the greatest number. This was of course substantially the doctrine of Adam Smith himself. The difference between the two philosophers is, that the latter applied the principle to economics alone, and is not rightly described as being, in philosophy, a utilitarian at all. In economics he thinks he can show that individual men left to follow their separate self-interest without let or hindrance from the state will unintentionally accomplish results that are for the public good,

[1] "Priestley was the first (unless it was Beccaria) who taught my lips to pronounce this sacred truth; that the greatest happiness of the greatest number is the foundation of morals and legislation" (*Commonplace Book*, 1781-85; *Works*, x. 142, cp. 567 note). The phrase occurs in Hutcheson's *Inquiry into Beauty and Virtue*, etc., 1738, p. 181. Comp. Mr. F. C. Montague's edition of the *Fragment on Government*, introduction, pages 33, 34 (Clarendon Press, 1891).

namely, the greatest wealth and commercial prosperity possible to their community. Adam Smith, in short, abstracts, not very rigidly, and in one class of actions only, from all motives but self-interest. Bentham, on the other hand, makes use of the same abstraction, not in one class, but in the whole range of actions falling under consideration of political philosophy. Not only in economical matters but in politics and general life, "there is no true interest but individual interest." Man is under two masters, pleasure and pain, and his action results from a calculation of the balance of consequences in favour of greater pleasure or less pain to himself individually. On the other hand, the same Bentham considers that the aim and intention of all legislation (as distinguished from the unintended result of actions let alone by the law) must be "the greatest happiness of the greatest number," which is a general and not an individual interest. It is hard to reconcile this regard to the general interest with Bentham's extreme individualism. He tries to do so, when he says it is imperative that the individual interest of the ruler should be one with the general interest of the ruled; but he does not explain how Bentham the legislator, being a mere man, can rise to a view in which his individual interest is certainly lost in the general. This is not the place to discuss the philosophical question; and it must be granted that, once Bentham has made his logical leap from the individual to the general happiness, he guides himself strictly by regard to the latter even in matters of trade, and has no faith in an absolute "harmony" of unregulated interests. He was an advanced free-trader; but we can see, from such proposals as those for the extension of escheats and for the taxation of bankers and stockbrokers, that his maxim of "greatest happiness" had lifted him above the extreme form of *laissez-faire*. The same maxim, when interpreted as a claim for equality of treatment for all members of the state ("every one to count as one and no one as more than one"), had much to do with the influence of the followers of Bentham ("the Philosophical Radicals"), represented by the early *Westminster Review;* and the close association of Bentham's politics with Ricardo's economics may therefore have helped in many quarters to secure a hearing for the latter during the crusade against the corn laws.

The philosophy of Bentham has influenced political economy in another and very different direction. The idea of a calculus of pains and pleasures which is used by JEVONS and others in building up the economic theory of value is founded (especially in the case of Jevons) very largely upon the suggestions of Bentham; and, even if the theory of final utility can be stated quite apart from any utilitarian psychology, it was certainly in the language of this psychology that it was first formally expounded by English writers.

It should be added that, like all the great modern economists, Bentham was devoted to the cause of education, especially the education of the labouring classes, whom he regards as the most valuable part of the community. He took shares in Robert Owen's factory in New Lanark, when (in 1813) OWEN bought out the old partners. His writings on education are hardly less numerous than those on legislation.

[His works and life, edited by Bowring, with an introduction by Hill Burton, fill eleven volumes, of which the tenth and eleventh contain the Life (Tait, Edinburgh, 1838 *seq.*) His chief economical works are: (vol. ii.) *Protest against Law Taxes, Supply without Burden, Tax with Monopoly* (*i.e.* a tax on bankers and stockbrokers); (vol. iii.) *Defence of Usury and of Projects in Arts, Manual of Political Economy, Conversion of Stock into Note Annuities, Invention and Discovery;* (vol. iv.) *Hard Labour Bill, Emancipate your Colonies;* (vol. viii.) *Tracts on Poor Laws and Pauper Management, Observations on the Poor Bill of Right Hon. William Pitt.* The treatises on *Rewards and Punishments* (vols. i. and ii.) have frequent economical references, though those of greatest length in the original edition have, in the collected works, been transferred to the *Manual.*

The *Manual*, together with the *Principles of Legislation*, has been in great part reproduced in the volume on "Bentham" (ed. Raffalovich) in the *Petite Bibliothèque Économique* (Guillaumin, 1888).

Critical estimates of Bentham's general work will be found in J. S. Mill's *Dissert. and Discuss.*, i. 330 *seq.* (from *Westminster Review*, August 1838), and in Adolf Held's *Sociale Geschichte Englands*, article "Bentham" (1881), and in an article by Prof. H. Sidgwick on "Bentham" in the *Fortnightly Review*, 1877 (comp. also account of Bentham's first principle in Prof. H. Sidgwick's *History of Ethics*). J. S. Mill's *Autobiography* brings out the influence of Bentham on Mill and Austin and the philosophical radicals in general. See also Bain's *Life of James Mill*, 1882.] J. B.

BEQUEST, POWER OF. The power of bequeathing property on death has descended to modern nations from the Roman law, which permitted three-fourths of the inheritance to be willed away from the next-of-kin. The Koran recognises a similar principle as regards two-thirds of a man's property, and the Mishna recognises gifts of property to take effect on death; but it is probable that these provisions are traceable to the influence of Roman law.

Under the feudal system a vassal was not permitted to substitute a stranger in his place without his lord's consent (2 Coke, *Inst.* 7), and the early English will was restricted to personal property. At common law, a man if he left a widow and children could bequeath one-third of his personalty; if he left only a widow or only children he could bequeath one-half; and if he left neither widow nor children he

could dispose of the whole (2 Blackstone's *Commentaries*). Some writers think that the above rules only prevailed when supported by special custom (Williams on *Executors*). By imperceptible degrees full power of bequest was introduced, except in the province of York, Wales, and the city of London, but by the 4 & 5 W. & M. c. 2, explained by the 2 & 3 Anne, c. 5 for York; 7 & 8 Will. III. c. 38 for Wales, and the 2 Geo. I. c. 18 for London, the special customs prevailing in these places were abolished.

As regards real property, the refusal of the common law to permit bequests led to the invention of uses and trusts by means of which land was devised indirectly. After the attempted abolition of uses by Henry VIII. the inconveniences arising from the want of testamentary power resulted in the 32 Hen. VIII. c. 1, which permitted a will to be made of all land held by SOCAGE and two-thirds of land held by knights' service tenure. The 12 Car. II. c. 24 abolished tenure by KNIGHT'S SERVICE, and the 55 Geo. III. c. 192 made COPYHOLDS devisable.

The practice of entailing land by settling it upon a number of life tenants in succession has greatly curtailed the freedom of bequest, as the estate of a life tenant must end with his death (see SETTLEMENT). In the United States and in Canada, Australia, and other English colonies, freedom of bequest is the general rule, as their legal systems are based on English law. In Scotland and on the continent of Europe the principle of the Roman law,—reserving a certain portion of the inheritance (*legitima portio*) for the heir has been followed. The law of Scotland gives the widow one-half the movable property if there are no children, one-third if there are children; one-third if there be a widow, one-half if there be no widow is reserved for the children; what remains may be bequeathed.

The portion of the property that may be bequeathed in the chief European countries is as follows:—

In AUSTRIA: one-half if there are descendants, two-thirds if ascendants only, the whole if neither ascendants or descendants. *Aust. Civ. Code*, par. 765, 766, 951.

In BAVARIA: one-half if there are five or more children, two-thirds if there are four or fewer children. *Bav. Civ. Code*, § 15.

In DENMARK: one-third if there are descendants, the whole if no descendants. *Dan. Civ. Code*, 262, 263. Special provisions regulate the bequest of a Soedegaard or "family seat," of a Böndergaard or "estate let to peasants." New entails are prohibited.

In FRANCE, BELGIUM, and HOLLAND: one-half if there is one child, one-third if there are two children, one-fourth if there are three children, and so on.

In GERMANY: various regulations prevail, but there is a universal rule that a proportion, varying in the different states, cannot be bequeathed away from the nearest relatives.

In GREECE: a share equal to that which on an equal division would descend to each of his direct heirs.

In ITALY: one-half if there are descendants, two-thirds if there are ascendants only, the whole if neither descendants or ascendants. *It. Civ. Code*, 805.

In NORWAY: one-half if there are descendants the whole if no descendants.

In PORTUGAL: one-third if there are ascendants or descendants.

In PRUSSIA: all the property, but this power is greatly limited by the existence of settlements, hereditary estates, and by the customs of particular localities.

In RUSSIA: (1) all acquired property; (2) all patrimonial property if there are no descendants. By the Emancipation Act of 1861 the descent of property of the peasants is to be governed by local usage. The communal organisation still prevails in Russia.

In SPAIN: one-fifth if there are descendants, one-third if there are ascendants only, the whole if there are neither ascendants nor descendants.

In SWEDEN: in towns one-sixth of the property if there are children, one-half if there are relatives only in the country, the whole if there are no relatives living.

In SWITZERLAND: each canton has its owr regulations, see *Les Législations Civiles des Cantons Suisses*, par C. Lardy, Paris, 1877.

[See *Reports on the Tenure of Land in Europe*, 1869 c. 66; 1870 c. 75.—*Succession Laws of Christian Countries*, by E. Lloyd (London, 1877).

Mill in his *Political Economy*, bk. ii. c. ii., and bk. v. c. ix., discusses the extent to which freedom of bequest should be permitted.] J. E. C. M.

BERKELEY, GEORGE, Bishop of Cloyne, Ireland, born 1685, died 1753. Bishop Berkeley's principal contributions to economic thought are contained in the *Querist;* of which the first edition appeared, in three successive parts, 1735-37. A second edition, increased by a few queries, and diminished by many, was issued in 1750. The portions of the first edition which did not reappear in the second are printed by Professor Fraser as an appendix to the third vol. of his edition of Berkeley's works.

Berkeley anticipates Adam SMITH in conceiving wealth and welfare philosophically; and is free from the errors of the mercantile system (*Queries* 556-561, and *passim*). He rightly states several technical points, as that "interest measures the true value of land" (1st ed. part i. 244), and that the worse currency expels the better (27, 464, 2d ed., 1st ed. part i. 246). Among many eternal verities stand out two or three doctrines which may appear to our generation less certain, or less important, than Berkeley held.

(1) Like CANTILLON, Berkeley ascribes paramount importance to the direction which unproductive consumption takes. "Whether the industry of the lower part of our people doth not much depend on the expense of the upper" (395)? Whether, by housebuilding and similar

expenditures, "much of that sustenance and wealth of this nation which now goes to foreigners would not be kept at home, and nourish and circulate among our own people" (402)? "Whether an Irish lady, set out with French silks and Flanders lace may not be said to consume more beef and butter than a hundred of our labouring peasants" (144)? "Of how great consequences are fashions to the public" (99)? "Whether it may not concern the wisdom of the legislature to interpose in the making of fashions" (13)?

(2) The wisdom of the legislature is also to be employed in creating a national bank. The scheme is explained more fully in the first than in the second edition. Berkeley asks "Whether the sure way to supply people with tools and materials, and to get them at work, be not a free circulation of money" (239)? He regards the "promoting of industry" as "the true and sole end, the rule and measure, of a national bank" (314). It may appear to us more doubtful "Whether there be any difficulty in comprehending that the whole wealth of the nation is in truth the stock of a national bank" (438)? And it savours now of heterodoxy to ask "Whether the true idea of money as such be not altogether that of a ticket or counter" (23, 441)?

(3) A less prominent, but still cardinal, part of Berkeley's teaching is that the multitude as well as the quality of population is an element of well-being. "Whether the main point be not to multiply and employ our people" (352)? "Whether it would not be delightful to live in a country swarming, like China, with busy people" (359)?

Some of the suggestions made in the *Querist* are found in the *Essay towards preventing the Ruin of Great Britain* (1721), where, besides inculcating moral reforms, Berkeley proposes to encourage population and manufactures.

[*The Works of George Berkeley, formerly Bishop of Cloyne*, edited by Professor A. C. Fraser, Oxford, Clarendon Press, 4 vols. 1871. The *Querist*, with notes, 1829.] F. Y. E.

BERLIN DECREES. See CONTINENTAL SYSTEM.

BERNARD, SIR THOMAS, BART. (1750-1818), was one of the originators of the co-operative movement in England. He was employed by his father, Francis Bernard, the Governor of the province of New Jersey, as his secretary, and was called to the bar in 1780, but early devoted himself to philanthropical pursuits. Assisted by Count Rumford, Eliot, Wilberforce, and especially by the Bishop Shute Barrington of Durham, he founded in 1796 the "Society for Bettering the Condition and Increasing the Comforts of the Poor," the reports of which are for the most part his personal work. The same benevolent tendencies inspired him to publish *The Case of the Salt Duties, with Proofs and Illustrations*, 1817, in order to bring about their repeal. Besides the above-mentioned works his "Observations on the different Proposals which have been made respecting the Poor during the two preceding Centuries," are very important, through their wealth of information. They are joined by way of an appendix to: *The Life of Sir Thomas Bernard, Baronet.* By the Rev. James Baker, his nephew and executor, 1819.

[*Dictionary of National Biography*, vol. iv. pp. 387, 388.—G. J. Holyoake, *Self-help a Hundred Years ago*, 1888, ch. iii. ch. iv. ch. vi.] S. B.

BERNHARDI, THEODOR VON, economist, historian, and diplomatist, born at Berlin 1802, died 1887. His youth was spent in Russia. In 1820-23 he studied at Heidelberg, and then, after travelling abroad, settled in Silesia. He was appointed a Prussian "Legationsrath" in 1865, and for some years was actively employed in diplomatic work in Italy, Spain, and Portugal. He is known as an economist by his *Versuch einer Kritik der Gründe welche für grosses und kleines Grundeigenthum angeführt werden*, 1848. "Under this modest title," says ROSCHER, "is concealed a series of thorough-going investigations on the questions which are most important from a general point of view. The whole belongs to the best of what has been written against whatever is one-sided in the doctrines of SMITH, and still more of RICARDO. Were Bernhardi writing in our day, he would without doubt be spoken of as following the same direction as the SOCIALISTS OF THE CHAIR." The point Roscher finds most characteristic in him is the *historical* spirit of his work, seeking, as it does, to explain what are the views of human affairs out of which the opposite doctrines on large and small properties have respectively taken their rise, and with which they must stand or fall. Bernhardi is also author of several valuable works on political and military history. (Roscher, *Geschichte der Nat. Oekon. in Deutschland*, p. 1041). J. K. I.

BESOLD, CHRISTOPH (1577-1638), the greatest German master of political science in the first half of the 17th century, was born at Tübingen in 1577. After the battle of Nördlingen he announced his conversion to Roman Catholicism, entered the Austrian service, and was for a time privy-councillor. So renowned was he in his own day that the emperor wished him to fill a chair in Vienna, the pope one at Bologna, and the court of Denmark one in that country. He died in 1638 at Ingolstadt, where he was professor. He was characterised by a many-sidedness which, says ROSCHER, reminds us of GROTIUS and SALMASIUS. He was a most voluminous writer on theology and philosophy, law, history, and politics. In his *De Aerario* (2d ed. 1620) he gives a full enumeration of the questions to which statistics should furnish a reply. His economic doctrines are stated in

his *Synopsis politicæ doctrinæ*, and his *Vitæ et mortis consideratio politica*, 1623. His views on usury are remarkable, especially when we remember that they long preceded the arguments of Salmasius on the same subject. He denies the Aristotelian doctrine of the unfruitfulness of money, makes loans on INTEREST a case of legitimate *locatio*, disputes the common interpretation of the Jewish prohibition of interest, and only asks for a legal limitation of the rate. He agrees with the mercantile school as to the necessity of preventing the exportation of money and regulating the corn trade, and as to the propriety of sumptuary legislation. His great defect is the unsystematic character of his writings, which often consist merely of *collectanea* from various sources, loosely connected and interspersed with frequent digressions. THOMASIUS attributes to him "multa diligentia, magnum ingenium," but "exiguum judicium."

[Roscher, *Gesch. der Nat. Oek. in Deutschland*, p. 195.] J. K. I.

BETTERMENT. A word imported from the United States of America, and denoting an improvement of property. It has recently become familiar in England as the name for a principle of taxation, the adoption of which, for the purposes of local taxation is recommended by some politicians—the principle being that persons benefited by public expenditure should contribute to such expenditure to the extent of the increased value of their property, and this not only if the improvement effected by the public authority was carried out for the purpose of conferring a benefit on such property, but also if the resulting benefit was purely accidental, the expenditure having been undertaken for a totally different purpose. The advocates of the principle assert that it has been recognised by previous legislation both in the United States and in England, and that in extending its application they are introducing no new system of taxation.

As regards England the following instances are given:

(1) Various Sewers Acts, beginning with a statute of Henry VI., by which Commissioners were appointed for the purpose of constructing sewers, drains, seawalls, and other works for the prevention of floods, and for the purpose of apportioning the cost of such works among the owners of property within their respective areas. The Commissioners were to ascertain by whose fault any damage had previously been caused, who was specially injured by the previous state of things, and who would be specially benefited by the new works. These facts were to be considered in the apportionment (see the words of the Commission as set out in 6 Henry VI. c. 5, and 23 Henry VIII. c. 5).

(2) § 159 of the Metropolis Management Act (18 & 19 Vict. c. 120), which enables any vestry and any district board to impose special rates on any part of the parish or district, or to exempt any part of the parish or district from rates, with respect to expenditure which has been incurred for the benefit of any particular part, or has not been incurred for the benefit of the whole of any parish or district.

(3) § 8 (8) of the Artisans' Dwellings Act (45 & 46 Vict. c. 54—now reproduced by § 38 (8) of the Housing of the Working Classes Act, 1890—53 & 54 Vict. c. 70), according to which the arbitrator appointed under that Act has power, in the case of the compulsory demolition of an obstructive building, to impose a special rate on the owner of a building previously obstructed, to the extent of any increase in the value of such building resulting from such demolition. Other statutory provisions have also been relied upon, but they are either exactly analogous to those mentioned or obviously irrelevant.

It is not difficult to show that the principle brought out in the first two instances is not even superficially analogous to the principle of betterment as defined above. Landowners belonging to a district threatened by floods must take common measures for their protection, and as some individuals are more careless or more selfish than others, public officers are appointed to ensure efficient measures and a just apportionment of the expense. There is here no public expenditure in the proper sense, nor is there any apportionment, based on the increase in the value of property. The Metropolis Management Act, in authorising the subdivision of parishes and districts for rating purposes, only recognises a principle which underlies all local government and taxation; viz. that expenditure incurred for the exclusive benefit of a particular area ought to be borne by the inhabitants of that area. As it often happens that a metropolitan parish or district comprises parts widely separated from each other, and public works undertaken for the benefit of one part may be useless or even hurtful to another part, it would be manifestly unjust to recognise no other area for local taxation except the arbitrary and frequently fanciful area of the parish or district. The Housing of the Working Classes Act seems, at first sight, to come nearer to the principle of betterment than the other statutes mentioned, inasmuch as it expressly declares that the increase in the value of improved premises is to be considered for the purpose of the apportionment of the contributions payable in respect of the compensation to the owners of obstructive buildings, and inasmuch as it introduces special rates upon individuals as distinguished from local areas; but here the analogy ceases. The demolition of an obstructive building is ordered on the ground of its being injurious to an adjoining house, and the primary object of the demolition is, therefore, the benefit of that

particular house. The special rate to be imposed in such a case is to be levied like a private improvement rate under the Public Health Acts; and, like a private improvement rate, it is not a tax in the usual sense of the word, but the repayment of a sum spent by the local authority for the special benefit of the party from whom it is to be collected.

In all these cases the expenditure is to be incurred with the special object of conferring benefits on a particular area or particular persons, and it is from that area or from those persons that the rate is to be collected. As Mr. Pember tersely says in his speech against the Strand Improvement Bill (p. 2): the principle hitherto not departed from is "that the incidence of taxation should be determined by the motive of the expenditure, and not by its accidental results."

The American legislation on the subject has been summarised by Mr. John Rae (*Contemporary Review*, May 1890, p. 644 *seq.*) He defines a betterment tax as "the special assessment of the expense (or part of the expense) of a local improvement on the adjoining property which is specially benefited by the improvement." This definition is somewhat ambiguous, as it is not clear whether such an assessment is to take place irrespectively of the object of the expenditure; and the ambiguity is not removed by the instances which are given of the imposition of a betterment tax, many of which seem explainable in the same way as the English statutes to which reference has been made. It is, however, quite clear that the principle of betterment, even in a more restricted sense, is not recognised in all the States of the Union, and that where it is recognised, the manner of applying it is by no means uniform.

The argument from precedent does not, under these circumstances, seem well founded, and the question as to the advisability of introducing the principle of betterment must be decided on the merits only. Before considering whether the proposed new method of taxation is just or expedient, it will be useful to ascertain how it can be carried out in practice. For this purpose the evidence taken by the Select Committee on the London Streets (Strand Improvement) Bill —a bill promoted by the London County Council and withdrawn after the rejection of its principal provisions—is highly instructive. The object of the bill was the widening of the Strand for the purpose of facilitating metropolitan traffic. This clearly appears from the preamble, which begins: "Whereas obstruction and delay to traffic is caused by the narrowness of the thoroughfare known as the Strand near the Churches of St. Mary-le-Strand and St. Clement Danes, and having regard to the extent and character of the traffic using the said thoroughfare, it is expedient that it should be widened and improved," etc., but as it was believed that the improvement was likely to cause an increase in the value of the adjoining property, it was proposed to raise part of the expenditure (not exceeding one-half) by contributions from the owners or occupiers of such improved property, which were to assume the form of yearly rent-charges. The bill created a betterment area, and provided that an arbitrator was to determine whether and to what extent the improvement rent-charge was to be imposed on each separate plot within that area. The award was to state (*a*) the amount of the increased value which would accrue to each plot; (*b*) the amount of the rent-charge to be apportioned to such plot; (*c*) the name of the person or persons by whom such rent-charge should be payable (being the owner of, occupier, or person otherwise interested in such plot).

The following are some of the practical difficulties disclosed by the evidence before the Select Committee.

1. The area of betterment was settled beforehand, and the arbitrator had no power to make an assessment on any property outside the area. At the same time the limits of the area were not fixed on any intelligible principle. The surveyor who made the plan almost admits this in his evidence. To the question (p. 101) "Why have you taken one side of Devereux Court and not the other?" he replies: "I am obliged to draw the line somewhere." Later on when asked (p. 103) "Why have you put it [New Court] in the betterment area?" he says: "You cannot always tell the reason why;" and similar answers are frequent. It may be objected that these facts are damaging to the proposed scheme, but not to the principle of betterment, but it is easy to see that the difficulty is not due to the accidents of this particular case. It is quite impossible to fix an area beforehand which is not more or less arbitrary; and if it is left to the arbitrator to find betterment wherever it exists without regard to any area, the difficulty of his task becomes insurmountable.

2. Even within a limited area the arbitrator's work may be so arduous as to become practically impossible. If no time be fixed for the making of the final award, great inconvenience must result; and if a time be fixed, the pressure of time must interfere with the completeness of the inquiry. Mr. R. C. Driver, one of the best known estate agents in London, being asked: "Now, apart from any machinery in this particular bill, do you think from your experience as a surveyor you could deal with this question of betterment?" replies: "I do not know the surveyor at the present moment amongst the whole range of them who is competent to deal with it" (p. 229). It might be said that the difficulty of the inquiry in the particular case was due to the large extent of the area, but it

would never be feasible to apply the principle of betterment to a small area, as no appreciable part of the total expenditure could be recovered in such a case.

3. The arbitrator, before making his award with regard to any particular plot, would have to hear the evidence concerning the whole area (see Mr. Tewson's evidence, on p. 273). There would, therefore, be a period of uncertainty extending over several years, concerning every piece of ground within the area, and as no one would purchase land subject to an uncertain contingent rent-charge, the whole property would become unsaleable during the period of suspense.

4. The arbitrator might find that only a very small part of the area derived any benefit. It would therefore be impossible to estimate beforehand what proportion of the cost would eventually become chargeable to the Metropolis.

5. The metropolitan ratepayers are now paying interest on sums borrowed for other metropolitan improvements which probably have conferred benefits on particular localities. If some inhabitants of the Strand district were made to pay for part of the expenditure by which they were specially benefited, they would be justified in asking for a readjustment of metropolitan taxation, so as to be relieved of part of the burden borne by them for the benefit of other localities.

Apart from these practical difficulties there are serious objections to the proposed adoption of the principle of betterment on grounds of justice and expediency. These may be shortly stated as follows:

1. There is hardly any public expenditure which does not benefit somebody, and it would be obviously unfair to give away these benefits in some cases and sell them in other cases. The erection of the New Law Courts has increased the value of property in the neighbourhood to an enormous extent, yet the cost has been paid entirely from imperial funds.

2. If public bodies may ask for contribution from persons benefited by their expenditure, irrespectively of the objects of the expenditure, private corporations or individuals ought to have the same right. A landowner who rebuilds a particular plot of houses, or plants trees or gardens for the benefit of his own property, may thereby increase the value of property within a whole district. A railway company may open a new area for building purposes; yet the persons benefited are not required to contribute to the outlay.

3. It is dangerous to establish a principle of taxation, the incidence of which, instead of being determined by definite general rules, depends on the discretion of one or more individuals whose fitness cannot be ascertained beforehand, and upon a calculation of probabilities which may and frequently will be erroneous.

4. If the effect of public expenditure or private property is to be considered at all, irrespectively of the object of the expenditure, the loss ought to be considered as well as the gain. If those who benefit ought to contribute, those who lose ought to be compensated. Some of the advocates of betterment recognise this consequence. Mr. James Beal, one of the witnesses called on behalf of the London County Council, in reply to the question (p. 199): "If you adopt that principle without regard to distance, would you also admit that to any distance people might claim, on the other hand, from the Council, for what you call an improvement doing damage to their property?" answers "Certainly." "Can you give any idea to the committee of what the pecuniary ultimate result would be, what your balance-sheet would look like?" "No." "It might turn out to be a very bad principle for you?" "When you assert a principle follow it to the death; do not trouble about results." It should be remembered in reference to the last remark that in this case the persons who asserted the principle were not the persons whom the result would have affected.

The metropolitan authorities have hitherto adopted a plan for obtaining the benefit of a rise in the value of property, occurring in consequence of improvements effected at the general expense, which has produced satisfactory results, and is free from the inconvenience of the betterment tax. This plan is known as the method of recoupment, and is applied in the following manner. The public authority acquires compulsory powers to purchase land beyond the immediate necessities of the contemplated improvement, at a valuation which does not include the prospective increase in value which will be due to improvement. Such land is resold when the improvement is completed, and by the profit on the re-sale a part of the cost of the improvement is repaid. The principal objection urged against this plan is that the price of the compulsory purchase includes trade interests which are destroyed, and that this loss takes away the profit which would otherwise have been obtained on a re-sale. There is not much force in this objection, inasmuch as most of the houses occupied for trade purposes are held by the tenants on short leases, and the public authority can therefore buy the freehold without paying for any trade interests, and allow the leases to run out before re-selling. The duty to re-sell may be postponed for a number of years, so as to allow for time for longer leases to run off. This plan, which is just and fair to everybody concerned, is free from most of the objections against the betterment scheme, and answers every legitimate purpose for which that scheme has been devised.

E. S.

BETTERNESS. A term used in bullion

transactions. It is usual in the older methods of reporting the results of assays, which are still retained side by side with the decimal system of reporting, to refer the proportion of gold or silver in ingots or bars to "standards" for the respective metals. Standard gold contains 22 parts of gold and 2 of baser metal in 24 parts; these parts are called *carats*, the gold carat containing 4 grains, the grain being subdivided into 8 parts. The standard for silver coin and plate consists of 11 ounces 2 dwts. of silver and 18 dwts. of copper in the pound of 12 ounces troy. *Betterness*, and *worseness*, are merely conventional terms which have been adopted for centuries to show how much gold in "carats" and "grains" and "eighths," and how much silver in ounces and pennyweights, the mass of metal contains in addition to, or in defect of, the legal standard, which standard affords the basis for calculating the money value of the metal. C. R-A.

BEZANTS. A name given to gold and silver coins which were struck at Byzantium (Constantinople), the capital of the Eastern empire, and which circulated throughout Europe from the 6th to the 15th or 16th centuries. The gold coins were current in England in Anglo-Saxon and Norman times, and may be said to have been used as international money.

Of the original bezants the chief gold coin was called the "SOLIDUS" and the silver coin the "miliarision." They were struck about the year 500 A.D., in the time of Emperor Anastasius, and were made of fine metal. They were, however, gradually debased, and by the 15th century, when the Eastern empire fell, they had become greatly reduced in fineness. Their weight also did not remain constant, and it is impossible therefore to say what was their exact value. A gold coin, however, which was probably the largest to which the title bezant could correctly be applied, was issued in the reign of Heraclius (615 A.D.) under the title of "hexagram." The weight of this coin was 105 grains (probably fine gold) and its value in sterling therefore would be 18s. 7d.

The current rate at which gold bezants were received throughout Europe has been estimated at a ducat (9s. 4d.), so that they may be taken as roughly equivalent to a HALF-SOVEREIGN; and this estimate would appear to be confirmed by the fact that 200,000 bezants, paid for the ransom of St. Louis of France (1250), were taken as equal to 100,000 LIVRES (pounds). Bezants, however, which were distributed at the coronation of Henry II. of France (1547), three centuries later, were equal in value to two DUCATS. As, however, it is certain that in the course of time the word bezant came to be applied to any gold coin in common use, quite apart from any consideration of its value or of its place of origin, such discrepancies in their estimated value cannot but be expected to occur. F. E. A.

BIANCHINI, LUDOVICO, born at Naples 1803, died 1871, was an economist, statesman, and historian of merit. Though much occupied in the highest official positions of the kingdom of Naples, he found time to write many excellent works on economical, administrative, and historical subjects.

His principal economical writings are the following:—*Principii del credito pubblico*, viz. *Principles of Public Credit*, published in Naples in 1827 and 1831.—*Della influenza dell' amministrazione pubblica sulla industria nazionale e sulla circolazione delle richezze*, viz. *On the Influence of the State on Industry and Circulation of Wealth*, Naples, 1828.—*Della storia delle finanze del Regno di Napoli*, viz. *History of Neapolitan Finance*, 3 vols., Naples, 1834 and 1839.—*Sullo stato delle ferriere nel Regno di Napoli*, Napoli, 1835.—*Sulla conversione delle rendite inscritte nel gran libro del debito pubblico*, viz. *On the Conversion of the Public Debt*, Naples, 1836.—*Principii della Scienza del ben vivere sociale e della economia pubblica e degli Stati*, viz. *Principles of the Science of Social Welfare;* the first volume, containing the history of political economy, was published in Naples in 1845; the second volume, containing the principles, was published in Italian in 1855, and in French in 1857.—*Storia economica di Sicilia*, viz. *Economical History of Sicily*, Naples, 1841. M. P.

BIBLIA, FABRIZIO, of whose life nothing is known except that he was born at Catanzaro, and wrote in 1621, by order of the Viceroy Zapatta, during one of the most serious monetary crises of the time, a pamphlet having the title, *Discorso sopra l'aggiustamento della moneta e cambii nel Regno di Napoli*, in Napoli, 1621. He proves himself to be much inferior to Antonio Serra, who wrote in 1613 (see A. SERRA). M. P.

BIDDLE, NICHOLAS, born 1786, died 1844; president of the Second Bank of the United States. A graduate of Princeton College, and later a student of law, he first became connected with the bank as a government director; was its president from 1823 to 1836, and a prominent figure through the eventful years of its unequal struggle with President Jackson. Biddle managed, on the whole with success, the affairs of this great institution, ramifying with its twenty-five branches through the United States. Most of his theories of banking were sound; but his theory as to bank-note issues was mischievous. Following the principle that guided the conduct of the Bank of England during the restriction, he believed there could be no excess of issues so long as the bank's advances were confined to good commercial paper, arising out of real transactions. He failed to distinguish between a bank-note proper, redeemable on demand at any branch in coin, and a draft, redeemable only at the branch on which it was drawn, and therefore practically irredeemable. Nearly all the difficulties of the bank can be traced to the vicious effects of this

principle. Biddle's theories on banking are to be found in the record of the actual operations of the bank under his management.

N. Biddle's writings are few; his best work was *Two letters to the Hon. J. Q. Adams; embodying History of the recharter of the Bank of the United States, and a view of the Present Condition of the Currency* (London, 1837). A. C. M.

BIEL, GABRIEL (1430?-1495), sometimes called the last of the scholastics, was born at Speyer about 1430. He enjoyed the esteem of the well-known Duke Eberhard of Würtemberg, and was one of his chief agents in founding (1477) the university of Tübingen, in which he became professor of theology. He was afterwards a member of the order of the Brothers of the Common Life. His principal work is entitled *Collectorium Sententiarum*, published in 1501. He belongs to the history of political economy by the portion of this work in which he treats of money from the moral or casuistic point of view. Though inferior to ORESME, the other distinguished scholastic economist, in penetration and clearness of thought, he shows a sound understanding of the fundamental principles of the theory of money. This part of the work was published separately by John Virdung at Mainz in 1541 under the title, *De monetarum potestate simul et utilitate tractatus.* It is also appended to the treatise of Marquard Freher, *De re monetaria veterum Romanorum et hodierni apud Germanos imperii*, 1605. (Roscher, *Gesch. der Nat. Oekon. in Deutschland*, p. 21 *seq.*; and H. Contzen, *Gesch. der Volkswirthschaftlichen Lit. im Mittelalter*, p. 161).

J. K. I.

BIGELOW, ERASTUS BRIGHAM, LL.D., born 1814, died 1879, was an active and successful man of affairs, the inventor of many improvements in textile machinery, especially of the power-loom for weaving carpets. As an advocate of protection, and prominent woollen manufacturer, he had much influence in shaping the complicated system of duties on wool and woollens adopted by the United States in 1867. His writings on tariff subjects show force and ability. He wrote also pamphlets and review articles on the currency and on general economic questions.

Among his pamphlets may be mentioned *Remarks on the Depressed Condition of Manufactures in Massachusetts*, Boston, 1859, and *Address on the Wool Industry of the United States*, New York, 1869. F. W. T.

Bigelow was noted as a manufacturer in the textile arts. He early gave attention to industrial subjects, and in particular to the tariff question. His first printed treatise on the depressed state of American manufactures appeared in 1858. This was followed in 1862 by his best work, *The Tariff Question considered in regard to the Policy of England, and the interests of the United States. With Statistical and Comparative Tables*, Boston, 1862, pp. 103. Appendix, pp. 242, quarto. The descriptive portion is largely historical, and is an attempt to show that the growth of English commerce was not due to free trade, but to other general causes, and that the removal of duties by England was no sacrifice. The statistical tables are valuable, and show a desire to bring together a great mass of data in a scientific way. The foregoing work is condensed and treated in a more popular form in *The Tariff Policy of England and of the United States contrasted*, Boston, 1877, pp. 61. Mr. Bigelow also published an *Address on the Wool Industry of the United States*, 1869; *Relations of Labour and Capital* (*Atlantic Monthly*, 1878). He was the first president of the National Association of Wool Manufacturers, organised in 1864; and had much to do in framing the tariff of 1867.

[See sketch of his life in *Bulletin of Nat. Assoc. of Wool Manuf.*, vol. ix. No. 4, 1879; also a brief memoir by Delano A. Goddard in *Proc. of Mass. Hist. Soc.*, Oct. 1882.] D. R. D.

BILL BROKING. Names do not always change with the things they describe. This is true of what is called "bill broking." When the business began early in last century the bill broker was really a broker—an agent between buyer and seller, procuring bills for the buyer, receiving a small commission for his trouble, but incurring no liability in respect of the transaction. The so-called "bill broker" is not now really a broker at all. Such business is still transacted, and on a considerable scale, but those known as bill brokers are really a sort of bankers, receiving from bankers and others large deposits which they invest for the most part in bills of exchange, agreeing to repay on demand or on short notice. They do also sell bills, but, as they guarantee the bills sold to the buyer, their liability remains intact just as much as if they held them till maturity. The bills are their own, and they do not get rid of the risk of holding them by selling them. Thus the character of the business has entirely changed. That change was no doubt gradual, and arose probably from the fact that bankers wanted to employ surplus money without the trouble and risk of selecting bills, and without the danger involved in locking up their funds in a security which could not at all times be readily turned into cash. Here a distinction must be made. So far we have referred to what is popularly called bill broking. But there is another large branch of the bill business which consists in the negotiation of bills drawn by British houses on firms abroad in payment for goods exported from these islands. In dealing with such bills, questions of EXCHANGE (*q.v.*) are all-important. The bills are drawn in the money of the country where payable, and they have to be turned into English money for

the convenience of the merchant who sells them. The bill broker makes his calculation as to the currency of the bill, the rate of exchange, and the contingencies of an exchange often altering, and names a price at which he buys the bill and takes all risks except that of non-payment. The amount of bills thus dealt in must be very large. But the bill broker proper has nothing to do with such bills. He is completely ignorant on all questions of exchange. The firms who deal in such bills are known as "foreign brokers," not as bill brokers. Leaving aside at present this special department of business in bills, there is really nothing peculiar in bill broking proper to distinguish it from banking on a great scale, except that a far larger proportion of the investments made by the bill broker must be made in bills of exchange for two reasons: (1) That he requires a large supply of bills of all dates to supply his customers who desire to purchase them, or to lend money on the deposit of bills as security, and (2) that, as he holds such large amounts payable at call or short notice, he requires a security which is perpetually revolving and coming to maturity as cash, and no known security answers this description so well as bills of exchange. He takes them daily of all dates, from a few days or weeks to run to six months, and they are perpetually falling in and supplying him with money.

It is a common observation that in banking no reserve is so good as a store of bills of exchange, and there is a constant demand for them on the part of banks, both in town and country, who cannot procure from their own customers a sufficient supply. It is one great part of the business of the bill broker to supply banks with this necessary aliment. The profit made on thus selling bills out and out is generally very small, but when once sold there is no further thought about the bill, if it is good; and the seller has the money in hand with which to make a fresh investment of the same kind. In this way a bill broker may turn over his "money" many times in a year, and in the aggregate obtain a fair return, though his liabilities on bills will be apparently enormous, but really very small, as the proportion of unpaid bills in a well-managed business is extremely slight. The history of the business seems, at first sight, to imply that the risks run are peculiarly heavy, so many of the old firms having disappeared through failure. As a bill depends entirely on names, and not on property, except occasionally where "document bills" are negotiated, it is obvious that much knowledge and experience are required in the choice of such paper. And even where there is a certainty of the ultimate payment of bills, there may be a great risk of having to wait long for payment, and in the meantime of a heavy lock-up of capital, a contingency which has often caused much anxiety and embarrassment. So have passed away the great house of Overend, Gurney & Co., the house of Sanderson, Sandeman & Co., Bruce, Buxton & Co., and divers houses of smaller repute. Such cases illustrate the peculiar dangers of the business, but that it can be maintained with safety and success is abundantly proved by the history of some of the companies who have conducted it during a long term of years, and of private concerns of old standing still remaining vigorous notwithstanding the severe competition which has arisen, to say nothing of smaller houses which have sprung up and flourished since 1866. Probably it may safely be said that, since that famous date, banking and bill broking have been conducted as a rule with more caution than during previous periods, and that the abuse of credit generally has been less rampant, so that mere adventurers have had far more difficulty than formerly in negotiating made-up (*i.e.* fictitious) bills.

In this connection it may be proper to note the prevailing impression that out of a given amount of business far less is done on bills, and far more by cash payments than was done in earlier days. As to the actual fact, there seems no doubt when the figures as to inland bill stamps are considered. From these it is evident that with an enlarged business fewer bills are created.[1] Again it is said that the custom of obtaining loans from banks instead of accepting bills has much developed—that a man who owes money, instead of accepting for the amount, takes a loan from his bankers and pays cash. In this case there is credit, only in another and less visible form. A bill drawn and negotiated may pass into many hands, but the loan cannot be transferred, and remains a private affair between the banker and his customer.

In most cases there is an important advantage to the debtor in paying cash, and banks prefer loans within certain limits, because they can generally charge a higher rate on a loan than on the discount of a bill. Probably both creditor and debtor prefer this mode of settlement to the creation of bills, because not only are stamps saved, but the nature of their relations in business is not in any way divulged beyond the banker's room. Another important cause of the diminution of foreign bills, that is of bills drawn on London by traders residing in foreign countries, is the development of the system of TELEGRAPHIC TRANSFERS, by which very large sums are now paid without the creation

[1] It is not so easy to account for this change as to prove its existence. One cause, no doubt, is a great increase of the actual wealth of those engaged in the larger transactions of the country. Men who used to accept bills now pay cash, and procure important advantages thereby. This is observed in all parts of the country, and means of course that such traders have largely increased their cash resources, and so are enabled to dispense with CREDIT.

of a bill. Formerly, for instance, almost the whole of the enormous produce and credit business between America and England was effected by sixty days bills. Now, it is said that the amount of bills of this description is not one-third of what it formerly was. This alone would mean a great reduction in the aggregate of bills, and the same process is going on, more or less, as to the trade with the East, etc. So, from various causes, the creation of bills no longer keeps pace with the extension of business; and complaints are frequent that "bills are scarce," that "it is impossible to find bills enough for the demand," and so on, the result being that holders of bills often have the discount market under control; hence the bank minimum rate no longer guides the market during considerable periods, and the machinery of the money market is dislocated, the bank being compelled to have recourse to unusual and extraordinary means of reducing the supply of loanable capital in the market. It is perhaps worth noting here that while in former years the Bank of England was one of the largest holders of bills of exchange, it is now believed to be one of the smallest amongst the larger holders. This change arises from the enormous growth of the deposits of other banks, which deposits are largely invested in bills, and as these fall due, are re-invested in the same security, so that there arises a continual demand for bills, and a tendency to depression of rates of discount. It is difficult for the bank to counteract this tendency. The amounts in question are too large, and as deposits seem ever on the increase and bills are not increasing in proportion, we have seen in recent years longer periods of "cheap money" than have ever before been known in the history of our commerce.

Other interesting observations arise in reference to the comparison of our own practice as to bills and that of other countries of commercial importance.

Take the case of France. It is said that there is no trade in Paris in bills as there is in London. The Bank of France holds always a large amount of bills which she has discounted for customers, but of course they are held till maturity and are not dealt in. She, having branches all over France, is the great French collector of money. Moreover credit is not developed in France as with us, so that bills are not created in sufficient quantity to support a great trade in them. Bills are of necessity drawn from Paris on all parts of France, and they are said to be mostly held by the Bank of France, but the bill is not, as with us, the most important of all banking securities (see Bank of France; Clearing House).

Take again the United States. In Chicago, for instance, the great distributing houses do not generally draw on local centres for the amounts due to them by smaller traders. They hold these as book debts which they collect as they can, in the meantime borrowing from banks for what they may themselves require. In England, on the contrary, such houses draw bills even for very small amounts which they discount in the market, thus avoiding a lock-up of capital. It cannot be said that credit is not fully developed in America, but in form it differs materially from our system. In some of the great eastern cities the custom is said to be different, and to resemble more that with which we are familiar, and in New York there is a limited market in bills, but not at all on the London scale. Banks buy bills and hold them, but there do not appear to be great houses collecting and dealing in bills after our fashion. Bill broking in fact may be said to be one of those British institutions which are peculiar to our country and arise from the peculiar nature of our commercial operations. It is a growth of that great expansion of credit which has so long distinguished our country, and to which we owe so much of our prosperity. The system is liable to much abuse, and has at times been grieviously abused, but it is not, therefore, to be set down as mischievous and useless. It is one of those means of economising the use of loanable capital which are intrinsically valuable and important, and are therefore certain to survive criticism, however severe. W. F.

BILL OF EXCHANGE. The word bill, meaning generally a statement in writing, is derived from *bulla* (Lat.) Bills of exchange, which may be divided generally between "inland" and "foreign," those which take their origin in transactions in one country only, and those which arise from transactions beyond the limits of that country in which they are payable, are among the most important of Commercial Instruments (*q.v.*) Bills, properly speaking, represent debts, they may be used, by negotiation, to transfer these debts from one person to another, and first-class bills form one of the best securities which a banker can hold (see Bill Broking). They sometimes, however, are drawn without being based on any genuine transactions; in this case their standing is more doubtful (see Accommodation Bill; Cross Drawing; Kite). Foreign bills sometimes originate in exchange operations, and are hence often employed in connection with the financial liabilities of governments. The amount of the bills of exchange in existence at one time in the United Kingdom is very large. It was estimated by W. Leatham (*Letters to Sir C. Wood*, 2d ed. p. 13), as being £135,000,000 in 1841, by W. Newmarch as not much less than £180,000,000 or probably £200,000,000 in 1856 (Tooke and Newmarch, *History of Prices*, vol. vi. p. 588), by R. H. Inglis Palgrave, as being from £300,000,000 to £350,000,000 in 1872 (*Notes on Banking*, p. 36). The amount is probably not larger now (1910).

There are some varieties in form according as bills are drawn in England on persons residing in foreign countries or otherwise. A very usual one is as follows:

Due 3d March 1891.

£500.

LIVERPOOL, 31*st* Jan. 1891.

One month after date pay to us, or order, Five Hundred Pounds value received in goods, as per invoice dated 25.1.91. A. B. & Co.

Messrs. C. D & Co.
415 Mincing Lane,
London, E.C.

[For further details see books named above, and Goschen's *Foreign Exchanges*, in which foreign bills especially are treated of.]

BILL OF EXCHANGE, LAW OF. The law relating to bills, notes, and cheques, differs from other branches of our mercantile law in two respects. First, it has been codified by the Bills of Exchange Act 1882 (45 & 46 Vict. c. 61), and secondly, the act in question applied to the whole of the United Kingdom; so that with the exception of two Scotch rules which are specially preserved, there is now a practically uniform body of rules. The Irish Free State can now deal as it likes with negotiable instruments, but Northern Ireland cannot.

By § 3 of the act a bill of exchange is defined as "an unconditional order in writing, addressed by one person to another, signed by the person giving it, requiring the person to whom it is addressed to pay on demand or at a fixed or determinable future time a sum certain in money to, or to the order of, a specified person or to bearer." The person who gives the order is called the DRAWER, the person thereby ordered to pay is called the drawee, and if he signifies his assent to the order in due form he is then called the ACCEPTOR. An acceptance must be in writing on the bill and be signed by the drawee (§ 17). When a bill is payable to a person named or to his order, it may be transferred by his endorsement. The person to whom it is so transferred is called the endorsee. The term "holder" includes the bearer of a bill payable to bearer, an original payee, and an endorsee.

Bills of exchange are said to have originated with the Florentines in the 12th century. From Italy their use spread to France, and from thence to England, and throughout the commercial world generally. A bill of exchange in its origin was an instrument by which a trade debt due in one place was transferred in another, thereby avoiding the necessity of transmitting cash from place to place. But in England mercantile usage adopted into law by judicial decisions has enlarged the original idea, and has created, by means of bills and notes, a perfectly flexible paper currency. Perhaps the full force of the English definition cited above is best brought out by contrasting it with some foreign system. French law, which adheres rigidly to the original theory of the uses of bills, offers the best contrast. In France a bill represents a trade transaction, in England it is merely an instrument of credit. English law gives full play to the system of accommodation paper (see ACCOMMODATION BILL); French law endeavours to stamp it out. Thus in England it is not necessary to express on the face of a bill that value has been given, for the law raises a presumption to that effect. In France the nature of the value given must be expressed, and a false statement of value voids the bill in the hands of all parties with notice. In England a bill may be drawn and payable in the same place. According to French law, though the rule is said of recent years to be disregarded in practice, the place where a bill is drawn must be so far distant from the place where it is payable that there may be a possible rate of exchange between the two. A false statement of places so as to evade this rule voids the bill in the hands of parties with notice. As the French lawyers put it, a bill of exchange necessarily presupposes a contract of exchange. In England a bill may be drawn payable to bearer. In France it must be drawn payable to order; if it were not so the rule requiring the consideration to be expressed would be a nullity. In England a bill payable to order becomes payable to bearer when endorsed in blank. In France an endorsement in blank merely operates as a procuration. In England if a bill be refused acceptance, a right of action against the drawer and endorsers at once accrues to the holder. This is the logical consequence of the currency theory. In France no cause of action arises unless the bill is again dishonoured at maturity; the holder in the meantime is only entitled to demand security from the drawer and endorsers. In England a sharp distinction is drawn between current and overdue bills. A person who becomes the holder of a bill after its maturity, acquires and can give no better title to it than the person from whom he took it had. In France and other continental countries, however, it does not appear that any such distinction is drawn.

In some foreign countries any creditor is entitled to draw on his debtor for the amount of his debt, but in England the right to draw arises only from special agreement. A reason for the English rule may perhaps be found in the fact that at common law, apart from special agreement, it is the duty of the debtor to seek out his creditor, as soon as the debt is due, and to tender the money to him.

Bills of exchange payable on demand may be stamped with either impressed or adhesive stamps, the stamp duty being one penny Foreign notes and bills must of course be stamped with adhesive stamps. Inland notes of all kinds, and inland bills payable otherwise

than on demand, must be drawn on impressed stamps. All notes and bills, other than bills payable on demand, are subject to an *ad valorem* stamp duty (Stamp Act 1891, as amended to date). Section 72 of the Bills of Exchange Act provides that when a bill or note is issued out of the United Kingdom it is not to be impeached because it is not stamped in accordance with the law of the place of issue. This affirms a general rule that the courts of one country take no cognisance of the revenue laws of another country. The enactment is clearly a fair one, as the present stamp act requires bills issued abroad to be stamped here, and makes no allowance for the foreign stamp.

The acceptor is the party primarily liable on a bill. By accepting it he "engages that he will pay it according to the tenor of his acceptance" (§ 54). The holder is entitled to require an absolute acceptance, but if the drawee will only give a qualified or conditional acceptance, the holder may either treat this as a refusal to accept, or at his peril take the qualified acceptance (§§ 19, 44).

The drawer of a bill is in the nature of a surety for the acceptor. He "engages that on due presentment it shall be accepted and paid according to its tenor, and that if it be dishonoured he will compensate the holder or any endorser who is compelled to pay it, provided that the requisite proceedings on dishonour be duly taken" (§ 55). The endorser of a bill is in the nature of a new drawer, and his obligations to subsequent parties resemble those of the drawer. When a bill is dishonoured the holder must, subject to certain specified exceptions (§ 50), give notice of dishonour to the drawer and endorsers he wishes to charge, and if the bill be a foreign bill he must also protest it. An inland bill may be noted, but no legal consequences attach to this proceeding, except the right to recover the noting expenses. When the liabilities of the drawer and endorsers are fixed by taking the proper proceedings on dishonour, the holder may either sue all the parties to the bill concurrently, or he may sue them in succession until he has recovered the amount of the bill with his damages and costs.

Sometimes, when it is doubtful whether the drawee will accept or whether he will be in a position to pay when the bill matures, the bill specifies some other person to whom the holder may resort in case of need. This person is called the "besoin" or "case of need." If he accepts the bill he is called an "acceptor for honour," and if he pays it he is called a "payer for honour." He must not pay the bill till it has been duly noted or protested for non-payment by the original drawee. On payment he becomes entitled to exercise the rights of the holder as against the party for whose honour he paid and all parties antecedent to him (§§ 65-68).

Comparing bills of exchange with other contracts, it will appear that the majority of the peculiar rules relating to them are deducible from the fact of their negotiability. A contract or chose in action is not assignable at common law, though in equity the benefit of it might be assigned subject to all equities between the parties. But a bill of exchange is part of the mercantile currency of the country, and its primary object is that it should circulate freely from hand to hand and that every honest holder should be able to deal with it like cash. A bill payable to order may be negotiated by the endorsement of the holder, completed by delivery. A bill payable to bearer, or endorsed in blank, may be negotiated by mere delivery. The consideration for its issue, acceptance, and negotiation is presumed until the contrary is shown or a *prima facie* case of fraud is made out, in which case the onus of proof is shifted (§ 30). If a bill gets into the hands of a "holder in due course" (§ 29), he gets an absolute title, and no antecedent fraud other than forgery affects him (§ 38). So strong is this rule in English law that if a person puts a blank signature on stamp paper, it is treated as an authority to any person to whom the paper is delivered to fill it up as a bill for any amount the stamp will cover, and if the bill, when complete, gets into the hands of a holder for value without notice, no objection that the paper was improperly dealt with is allowed to prevail (§ 20). The laws of all countries agree in the rule that no title can be made to a bill through a forged signature, but English law is peculiarly severe on the party who pays the bill (§ 24). Except in the case of a demand draft drawn on a banker (§ 60) the person who pays a bill pays it at his peril if the party presenting it claims under a forged endorsement. Thus if the drawee of a bill accepts it, payable at his bankers, after a forged endorsement has been placed on it, the bankers cannot debit his account with the amount of such payment. Under the continental codes, a banker who paid such a bill without any notice of the fraud would be protected.

A further peculiarity of English law is the compulsory allowance of three days of grace on all bills payable otherwise than on demand (§ 14). It is believed that all the continental codes now agree in abolishing this fictitious maturity for bills, but the holder is generally entitled to wait one or two days before the bill is protested.

From the references to foreign law already made, it appears that the practice of the mercantile world, with reference to bills of exchange, is by no means uniform. Rules, therefore, are required for regulating this conflict of laws, and they are provided by § 72 of the act, their guiding principle being the maxim "locus regit actum."

A PROMISSORY NOTE is defined by § 83 of the Act to be "an unconditional promise in writing made by one person to another, signed by the maker, engaging to pay on demand or at a fixed or determinable future time a sum certain in money to, or to the order of, a specified person or to bearer." There are various statutory restrictions on the issue of promissory notes payable to bearer on demand for less than £5, and there are further restrictions on the issue by bankers of either bills or notes for any amount payable to bearer on demand. When a promissory note is made by two or three makers, they are liable, either jointly or jointly and severally, according to the tenor of the instrument (§ 85). In this a note differs from a bill, because if a bill be accepted by two or more drawees, they are only liable jointly and not jointly and severally. But for the most part the provisions of the act with reference to bills of exchange apply, with the necessary modifications, to promissory notes. In applying those provisions, the maker of a note is deemed to correspond with the acceptor of a bill, and the first indorser of a note is deemed to correspond with the drawer of an accepted bill payable to drawer's order (§ 89). The provisions of the act relating to presentment for acceptance, acceptance, acceptance *supra* protest, and bills in a set have no application to notes. Moreover, protest of a foreign note is unnecessary for English purposes (*ibid.*)

For the economic operation of bills and notes as instruments of credit, see BILL OF EXCHANGE, CREDIT, CROSS DRAWING, Goschen's *Foreign Exchanges* and Mill's *Political Economy*, bk. ii. For the English law see Byles, *Bills of Exchange*; Chalmers, *Bills of Exchange*; Chitty, *Bills of Exchange*. For American law, see Story, *Bills of Exchange*; Parson's *Law of Notes and Bills*; Daniell, *Negotiable Instruments*. For French law see Nouguier's *Lettres de Change et Effets de Commerce*, ed. 4 (1875), summarising the provisions of the various continental codes. For Indian law on the subject see Indian Negotiable Instruments Act 1881, as amended by Act II. of 1885. Australia and several of the colonies have adopted the English Act. Conferences were held at the Hague in 1910 and 1912 in the hope of obtaining a uniform body of rules relating to bills and notes throughout the mercantile countries of the world. But nothing as yet has come out of their deliberations. M. D. C.

BILL OF LADING. A document by which the master or some other agent of the shipowner on his behalf acknowledges the receipt of certain goods, and undertakes to deliver them to the consignee at the port of destination, against the payment of freight and subject to certain contingencies releasing him from liability. The consignee is either named in the bill of lading, or it is simply stated that the goods are to be delivered to the order of the shipper, in which case the goods are delivered to the person to whom the document is indorsed, or to a subsequent indorsee. If the bill of lading is made out to the consignee or his order, the goods are delivered either to the consignee or an indorsee, but if the consignee is named without any additional words he is the only person who has a legal right to the delivery of the goods. As a general rule an indorsee acquires the property in the goods as soon as a properly indorsed bill of lading is handed over to him with that intention, but this rule is subject to several exceptions, the most important one being the so-called right of stoppage *in transitu*, which enables an unpaid seller to stop the delivery of the goods if the buyer has become insolvent before they came into his power. If, however, the buyer has in the meantime transferred the bill of lading to a *bona fide* holder for valuable consideration, the right is no longer available. It must also be mentioned that a bill of lading is not negotiable in the same sense as a cheque or a properly indorsed bill of exchange. A person who in good faith gives value for a stolen current bill of exchange indorsed in blank, or for a cheque to bearer, acquires a good title, though the thief from whom he bought it had none. This is not the case with regard to a bill of lading, as a subsequent holder of a document of this nature cannot (except in so far as he is not affected by the right of stoppage *in transitu*) acquire a better title than a previous holder had. In former times the contractual rights and liabilities arising from a bill of lading (*e.g.* the right to sue in case of loss) remained with the original parties, notwithstanding the transfer of the property in the goods, but the statute 18 & 19 Vict. c. 111 enacts that "every consignee of goods named in a bill of lading and every indorsee of a bill of lading to whom the property in the goods therein mentioned shall pass upon or by reason of such consignment or indorsement, shall have transferred to and vested in him all rights of suit, and be subject to the same liabilities in respect of such goods as if the contract contained in the bill of lading had been made with himself." Bills of lading are generally made out in sets of several identical copies, which are forwarded by different mails, so that one may serve in case of the loss of another. The system is not free from danger, as a fraudulent holder may negotiate each copy separately. Occurrences of this sort have happened on more than one occasion, and have caused a considerable amount of litigation.

E. S.

BILL OF SALE. A document purporting to assign the property in personal chattels remaining in the possession of the assignor. Assignments of this nature as a general rule are not made for the purpose of a regular sale, but merely by way of security for a loan. A bill of sale is void as against execution creditors, if it is not drawn up in the statutory form and

registered in the central office of the High Court within seven days of the date of issue; it must also be renewed every five years. A charge of personal chattels in a debenture need not be registered as a bill of sale. The acts of parliament now regulating the law of bills of sale are those of 1878 and 1882 (41 & 42 Vict. c. 31; 45 & 46 Vict. c. 43). A bill of sale given by way of security for the payment of a sum under £30 is void. E. S.

BILLON. This conventional term, French rather than English, is derived from a corruption of the low-Latin word *billio*, or *bullio*, from which springs the English word bullion. In French mint language it has certainly, from the 13th century, if not before, signified the degeneracy of the pure contents of a coin through an alloy, generally silver in the gold pieces, or copper or lead in the silver pieces, giving them a particular degree of impurity, and thus debasing their intrinsic value. In the old French coinage, down to the monetary reform in the first revolution, the silver marc of a given weight was imagined as divided into twelve parts called *deniers d'alloi*, eleven of them pure silver and one alloy. This mixture was silver of $\frac{11}{12}$, or, in decimals, of ·916$\dot{6}$ fine, and was the old standard. This was altered to $\frac{9}{10}$, or, in decimals, to ·900 fine, from 1804 to the present time. All degrees of fineness below it, or below the standard at the time being, were considered as changing the coin to billon.

That designation is also largely applied by numismatists to ancient silver coins, and notably to those of the Roman and Greek series, when these are materially below what ought to be the average standard fineness of the metal, according to the scales laid down at the best periods for purity of the silver coinage, and it is even extended by them to what are really false coins (although struck by state or other ruling authority) of copper, or of brass, plated or washed over with silver, and passed with forced currency as silver coins. Thus the term is made to cover a wide range of meaning, varying from a comparatively small degree of degradation in fineness down to the merest pretence of having any actual intrinsic value of precious metal in the composition of such coins.

It is noticeable that the term billon has not been applied in France without some exceptions in the case of gold below the standard. It was so applied in the Middle Ages, but, in the time of Louis XIV., when under twelve carats out of the twenty-four carats were of pure gold, the alloy was called "silver holding gold," or, if the proportion of copper to gold was of like amount, the alloy was called "copper holding gold." The term billon has also been generally used in France for all copper or bronze money, even when it is of full weight according to mint indentures. In some points of view this appears contradictory, but the use of the word is probably intended to convey the meaning of a token coinage, the intrinsic value being so largely below the nominal one. Whilst the full-weighted five-franc silver pieces of France, Italy, Belgium, Switzerland, and other states which are allies in the now subsisting Latin monetary union, continue to be coined $\frac{9}{10}$ or ·900 fine, their 2 franc, 1 franc, and $\frac{1}{2}$ franc pieces are still coined ·835 fine, or just on the borderland which divided silver of the old standard from billon. But in England our coinage of crowns, four shillings, half-crowns, florins, shillings, sixpences, and threepences, is struck of a higher degree of fineness, namely, ·925. In the general result it would seem that, as standards vary in different countries, what is locally billon in any one of them need not necessarily be so in others, and that such a variation prevents any precise general international agreement as to what the word exactly signifies at different places or times (see BULLION). F. H.

BI-METALLISM. This compound word is used to describe the employment of two metals, to form at the same time, in combination with each other, the standard of value. The final report of the Royal Commission on Gold and Silver describes bi-metallism as follows: "A bi-metallic system of currency to be completely effective must, in the view of those who advocate it, include two essential features: (*a*) An open mint ready to coin any quantity of either gold or silver which may be brought to it. (*b*) The right on the part of a debtor to discharge his liabilities, at his option, in either of the two metals, at a ratio fixed by law." It is usually understood now to mean that the two metals are used thus at a fixed proportion to each other, as in the countries forming the LATIN UNION (*q.v.*), in which the ratio of 1 gold to 15½ silver by weight forms the legal basis, or in the United States in which the ratio is 1 to 16. Few economic subjects have of recent years been discussed with more heat, owing partly to the fact that some on the one hand have considered that the adoption, or the retention, of bi-metallism would confer certain advantages on particular classes, and that some on the other hand think that MONOMETALLISM profits other classes.

The main requisite in a standard is, that it should be, as nearly as possible, constant in its purchasing power. The selection, or the construction, of a stable standard of value is, however, even more difficult than that of an undeviating standard of time. In this connection it is advisable, while considering here the possible employment of two metals for this purpose, to quote the words of John LOCKE on the advantage of employing one metal only,—as this quotation sets forth the drawbacks to bi-metallism without any reference to recent controversy,—bearing in mind the circumstance that at the date when Locke wrote international bi-metal-

lism had never been thought of. "Two metals, as gold and silver, cannot be the measure of commerce both together in any country; because the measure of commerce must be perpetually the same, invariable, and keeping the same proportion of value in all its parts" (*Further Considerations concerning raising the Value of Money*, John Locke). On the principle thus expressed the STANDARD OF VALUE, understood in the sense of the measure provided by the government, through their engagement to coin at a fixed rate the metal brought to them for the purpose, has been based in this country by legal enactment since 1798, in practice nearly since the commencement of the 18th century, though a double standard remained legal till the date mentioned. Gold became the general medium of circulation in this country either through choice or, what seems the more probable, through the differing ratio of value in foreign countries which made silver the best export. In 1798, shortly after the suspension of cash payments (1797), the government suspended the coinage of silver. Up to 1783 every man might make his payments in silver or gold at his option; though after 1774 he could only pay in silver up to £25 "by tale," but "by weight" up to any amount. There was no restriction as to payments in gold. The general practice of the country before the restriction was confirmed by the distinct adoption of a gold mono-metallic basis on the resumption of specie payments in 1816. Silver was, however, allowed to be held as part of the reserve of the precious metals against which the notes of the Bank of England are allowed to be issued by the 3d clause of the act of 1844 (see BANK NOTE, BANK OF ENGLAND), which permits the bank to retain in the issue department silver bullion to an amount not "exceeding one-fourth part of the gold coin and bullion at such time held by the Bank of England in the issue department." Silver bullion was accordingly held by the issue department up to large amounts (the average for the year 1846 was £2,169,000; see *Bank Rate in England, France, and Germany*, 1844-78, Palgrave), but the practice was discontinued in 1853, and has never since been resumed. While this country became mono-metallic, in France a standard fixed at the rate of 1 mark of gold to 15½ of silver was definitely established in 1785, and continued by the law of 1803, gold and silver, in 5-franc pieces, being equally legal tender for any amount. The Latin Union, as the coinage treaty of 1865 was called, which included France, Belgium, Switzerland, Italy, Greece, and Roumania, carried on its mintage operations on the same basis as in France till 1874, after which date the coinage of silver was restricted and practically suspended. A considerable drop in the market price of silver followed. From having been 4s. 11½d. an oz. in 1344 it sank to 3s. 6d. both in 1886 and in 1889, though a recovery has taken place since. The results of this alteration have been widespread, the effect being particularly seen on the rate of exchange between countries with a gold and those maintaining a silver standard; and less distinctly on prices of commodities in general within the countries concerned. Much discussion has hence ensued. It may, however, be observed that a real mono-metallism had not existed in Europe till 1873, as the existence of the Latin Union countervailed its effects both in gold and silver using countries. The question has been treated with great scientific power by Professor JEVONS, who explains in his book on *Money* "that a *compensatory*, or as I should prefer to call it, *equilibratory action*, goes on under the French currency law, and tends to maintain both gold and silver more steady in value than they would otherwise be." He points out that when one metal becomes more sought for than the other there is an inevitable tendency to import the cheaper and export the dearer, and continues: "At any moment the standard of value is doubtless one metal or the other, and not both; yet the fact that there is an alternation tends to make each vary much less than it would otherwise do. It cannot prevent both metals from falling or rising in value compared with other commodities, but it can throw variations of supply and demand over a larger area, instead of leaving each metal to be affected merely by its own accidents. Imagine two reservoirs of water, each subject to independent variations of supply and demand. In the absence of any connecting pipe, the level of the water in each reservoir will be subject to its own fluctuations only. But if we open a connection, the water in both will assume a certain level, and the effects of any excessive supply or demand will be distributed over the whole area of both reservoirs. The mass of the metals, gold and silver, circulating in Western Europe in late years, is exactly represented by the water in these reservoirs, and the connecting pipe is the law of the 7th Germinal, An. xi. (1803) which enables one metal to take the place of the other as an unlimited legal tender." The theory on which bi-metallism rests is completely explained in these observations of Jevons. With respect, however, to the advisability of a nation adopting a single or a double standard, Jevons expresses himself in cautious terms, adding (*Money*, p. 141), "The question seems to be entirely one of degree, and in the absence of precise information is quite indeterminate."

The final report of the Royal Commission on Gold and Silver, 1888, expresses a decided opinion that the bi-metallic system of the Latin Union exerted a material influence upon the relative value of the two metals (par. 193): "So long as that system was in force we think that, notwithstanding the changes in the pro-

duction and use of the precious metals, it kept the market-price of silver approximately steady at the ratio fixed by law between them, namely, $15\frac{1}{2}$ to 1." With respect to the position of the metals in two countries, in one of which silver, while in the other gold, is employed, we may quote from an article in the *Economist* of 2d February 1878, which observes that the "relative value, the proportions in which the two metals will exchange for each other, are continually fluctuating, and they must inevitably do so unless it were possible to fetter the supply in such a manner that only the right proportions of each metal should be brought to market at the same time. Two articles, of course, cannot remain always at the same relative value to each other unless the production of both is maintained at the same proportion, and no excess or diminution of the supply exists. Nor can they do so unless they are of identical utility, and are capable of performing identical services to man. When two commodities perform exactly the same functions, and are equally capable of doing so, being equally desirable in every respect, they will continually tend to exchange for other things in the same proportions. But this cannot be said to describe the exact relations of gold and silver to each other." The results of the export of the one and the import of the other metal are then referred to: "The loss arising from these causes may not come home to the inhabitants of the country where it occurs in a clear and obvious way. The inhabitants may, if silver is cheap and gold is wanted for export, retain silver for their own domestic use and employ it in their circulation till a fluctuation in the exchanges renders it possible for the gold to return. The banks which make the remittances will, in this case, obtain a profit from the transaction, while the people who employ the money will hold over the currency they receive in the ordinary way of trade till the tide sets in the contrary direction. Thus the loss which the country really experiences from employing a currency which is depreciated, as compared with the currency of other countries employing a more valuable standard, will be veiled from view, though it really exists." One metal out of the two is taken in this case for export because it is profitable to the exporter to send it rather than the other, but it would not be sent unless its export were advantageous. As the risks to any single country which employs bi-metallism are obvious, the advocates of the system recommend that all countries should employ it, as this would, they consider, prevent a preferential movement of either metal from one country to another. Thus the work recently published by Sir D. Barbour, *The Theory of Bi-metallism*, recommends "the adoption of universal bi-metallism at a fixed ratio to be determined by mutual consent." "Failing universal bi-metallism," Sir D. Barbour continues, "it would be desirable that bi-metallism should be adopted by a group of countries sufficiently strong to maintain the fixed ratio," Sir D. Barbour's contention being "that the existence of this fixed ratio for the purposes of the currency will control and regulate the market price of the two metals so as to prevent it from varying in any material degree from the fixed legal ratio of the currency."

Rochussen is of the same opinion. Quoting the words of a Belgian writer in the *Revue Générale*, October 1887, p. 653, "'Si le kilogramme d'or vaut actuellement sur le marché vingt kilogrammes d'argent, c'est apparemment que le kilogramme d'or, pour être extrait de la terre, coûte autant qu'il en coûte d'extraire vingt kilogrammes d'argent,'" he comments on them thus—"'Apparemment'! No explanation of the market price can be more in conflict than this is with all the facts of mining industry, and all the principles of money. In the first twenty years of the 19th century the production of gold stood in comparison to that of silver (valued at 1 to $15\frac{1}{2}$) as $2\frac{2}{3}$ to 8. In the following period of twenty years, nearly as 4 to 8; thereafter from 1841 to 1850 as 8 to 8; from 1851 to 1860, very nearly 28 to 8; in the following five years, as 23 to 8; and from that time onwards to 1870 the proportion fell to 18 to 8, showing even at that rate an increase of some 675 per cent in the proportion. Yet in all this time there was no greater change in the market price, now of one metal, now of the other, than about 2 per cent.

"Or if we choose to look rather at the facts which concern the demand, than at those which concern the supply (*aanbod*), we shall see that the steadiness of price was not affected, though the demand for gold was greatest when the supply was least, and the demand for silver was greatest when the supply of that metal was least." (Rochussen, *Geld- en Muntwezen*, p. 287.)[1]

The statement given above shows the main features of the working of a bi-metallic system. Jevons remarks (see Letter from Jevons to M. Wolowski, printed in Jevons's *Investigations in Currency and Finance*, p. 304) that the French currency law has "no doubt assisted to keep gold and silver at a nearly invariable price as compared one with the other." As mentioned previously, the Gold and Silver Commission unanimously concurred in supporting the same opinion. Jevons also observes that "it is indispensable to remember the fact, too much overlooked by disputants, that the values of gold and silver are ultimately governed, like

[1] M. Rochussen held the position of minister for foreign affairs in Holland 1879 and 1880, and is at the present time (1890) a member of the council of state. His father, it may be mentioned, was minister for the colonies,—also for seven years governor-general of Dutch India, and twice minister of finance. The circumstances of Holland give those engaged in its administrations very considerable opportunities for watching the fluctuations of the standard of value.

those of all other commodities, by the cost of production. Unless clear reasons, then, can be shown why silver should be more constant in its circumstances of production than gold, there is no ground for thinking that a bi-metallic gold and silver money will afford a more steady standard of value than gold alone" (Jevons, *Investigations in Currency and Finance*, p. 318). "Ultimately" is the governing word in this quotation, and is frequently overlooked; it may mean an almost indefinite period. The reader must be referred to the works of Jevons here cited for the whole of his arguments; it is hardly possible to express them fully by any selection.

As a matter of history it appears that the value of silver relatively to gold has tended to diminish as ages have passed by. Meanwhile France and the Latin Union, after trying the experiment of an international bi-metallism on a very considerable scale, have abandoned, or at least suspended the free coinage of both metals at a fixed ratio. The United States, after employing a bi-metallic ratio of 1:15·25 in 1786, changed to 1:15 in 1792, to 1·16002 in 1834, to 1:15·988 in 1837, and adopted the gold dollar only as the UNIT OF VALUE in 1873. A limited coinage of silver dollars was directed in 1878 (by the Allison or Bland Act), which possess "full paying power, except in cases where it is strictly stipulated otherwise in the contract." A somewhat limited system of bi-metallism was thus in force in the United States from 1878 to 1890. In 1890 an act authorising a great extension of the coinage of silver was passed by the legislature (see BLAND ACT; SILVER LEGISLATION IN THE UNITED STATES). The question of the advisability of adopting a bi-metallic standard has been discussed by many writers recently, but by none in so dispassionate a manner as by Jevons, who observes, "It may be safely said that the question of bi-metallism is one which does not admit of any precise and simple answer. It is essentially an indeterminate problem. It involves several variable quantities and many constant quantities, the latter being either inaccurately known or, in many cases, altogether unknown. The present annual supplies of gold and silver are ascertained with fair approach to certainty, but the future supplies are matter of doubt. This demand for the metals again involves wholly unknown quantities, depending partly upon the course of trade, but partly also upon the action of foreign peoples and governments, about which we can only form surmises" (Jevons, *Investigations in Currency and Finance*, p. 317). The use of both gold and silver as standards of value is obviously most important, and it equally cannot be doubted that the disuse of either must lead, as the disuse of silver has recently done, to considerable fluctuations in the prices of commodities. To recommend, however, a country which is now mono-metallic to become bi-metallic, or a corresponding change on the part of a bi-metallic country, requires a far more complete inquiry than has yet been made. The theory may be explained in comparatively few words, but for any adequate statement of the practical results the reader must be referred to the following works, which are far, however, from exhausting the subject.

[*Bibliography.*—The following list is derived in part from the one at the end of Prof. W. S. Jevons's *Investigations in Currency and Finance*, and that in Appendix to *Proceedings, etc., of the International Monetary Conference of 1878*, drawn up by Mr. Dana Horton. The reader is referred to these lists for fuller information. The literature on the subject is very extensive, to a great extent in articles and letters in newspapers and other periodicals. The arguments on the subject will be found stated in Jevons, *Investigations in Currency and Finance*, London, 1884.—*Money and the Mechanism of Exchange*, 1875, also by Jevons.—*Reports of Committee of House of Commons on Depreciation of Silver*, 1878.—*Report of Commission on Trade and Industry*, 1886, and Appendix B to 3d *Report*, by R. H. Inglis Palgrave.—*Report of Commission on Gold and Silver*, 1887.—Sir D. Barbour, *Theory of Bi-metallism*, London, 1885.—S. Dana Horton, *Silver as an International Question* (an address to Congress); also much information in *Proceedings of the International Monetary Conference of 1878*, and other writings.—*Conférence Monétaire International*, 1867.—*Procès Verbaux*, Paris, 1867. See also Prof. H. Sidgwick's observations that "a double standard with a fixed ratio will be stable against minor variations of supply," *Principles of Political Economy*, bk. ii. ch. v. ed. 1883. —Prof. J. S. Nicholson, *Money and Monetary Problems*, 1888, in which the arguments in favour of bi-metallism are stated with great clearness and force.—*The Silver Question* (paper published by the Bi-metallic League, whose other publications are numerous).—H. R. Grenfell and H. H. Gibbs, *The Bi-metallic Controversy*, London, 1886, and other works by these two writers.—Prof. Leon Walras, *Théorie de la Monnaie*, Lausanne, 1886. —*Théorie Mathématique du Bi-métallisme*, Paris, 1881.—Prof. Adolph Soetbeer, *Materialien zur Erläuterung und Beurtheilung der wirthschaftlichen Edelmetalverhältnisse und der Währungsfrage*, Berlin, 1886. This is translated in the Appendix *Final Report Gold and Silver Commission*.—Also see *American Reports from Consuls of the United States*, No. 87, Dec. 1887.—Ernest Seyd, *Bi-metallism in 1886*, London, 1886 —R. Giffen, *Essays in Finance*, 1880, and other dates, Paper on "Some Bi-metallic Fallacies,' *Journal Institute of Bankers*, June 1886, and other works.—Prof. Emile de Laveleye, "The Economic Crisis and its Causes," *Contemporary Review*, May 1886, and other papers,—Samuel Smith, *The Bi-metallic Question*, London 1887.—Rt. Hon. G. J. Goschen, "On the Profitable Results of an Increase in the Purchasing Power of Gold," *Journal of Institute of Bankers*, May 1883.—E. de Parieu, "Situation de la Question Monétaire Internationale" (*Journal des Économistes*, April 1868), etc.—Henri

Cernuschi, *M. Michael Chevalier et le Bi-métallisme, Silver Vindicated, The Bland Bill, Bi-metallism in England and Abroad, Bi-metallism at 15½ a Necessity, The Monetary Conference, The Bi-metallic Par*, London, various dates, etc. *Mémoire sur le Bi-métallisme International et le moyen juste de la réaliser*, W. F. Rochussen, La Haye, 1891.—*Le Problème Monétaire et sa solution par G. M. Boissevain*, Paris and Amsterdam, 1891, translated by G. T. Warner, *The Monetary Question*, London, 1891.—Also *Journals of Statistical Society*, London, *Institute of Bankers*, London, *Economist*, London, *Économiste Français*, Paris, *passim*; many detached articles and pamphlets by W. Bagehot, P. Leroy Beaulieu, O. Haupt, Prof. H. Sidgwick, Sir R. Giffen, etc. The number of writings on this subject has, in general, restricted the reference given above to one of the works of the authors named.]

BIRTH-RATE* means generally the ratio which the number of births per annum bears to the number of persons in the population under consideration. The rate thus defined depends largely on another rate which has been called *fecundity*, and has been defined as the ratio which the number of births per annum bears to the number of persons of reproductive age, or of women of reproductive age (say 15-45); or of married persons, or wives only, of that age (see Bertillon, "Mouvement de la Population" in *Annales de Démographie*, vol. i.; also Quetelet, *Physique Sociale*, bk. ii. § 6). Some of these relations are illustrated by the accompanying table which shows the average annual births per 1000 in the kingdom of Bavaria (1871-1872). It is taken from Mayr's *Die Gesetzmässigkeit in Gesellschaftsleben*, p. 244. (Decimals have been omitted.)

Legitimate births per 1000 wives between ages 15-45.	Illegitimate births per 1000 unmarried women between ages 15-45.	Legitimate and illegitimate births per 1000 women between ages 15-45.	Legitimate and illegitimate births per 1000 of the general population, men and women of all ages.
368	45	182	41

Fixing attention on legitimate births, we may regard the birth-rate as depending chiefly on two factors: (*a*) the ratio which the number of married persons of reproductive age bears to the general population, and (*b*) the ratio which the number of births per annum bears to the number of married persons of reproductive age. The first factor (*a*) varies with the number of newly married persons; this varies with prosperity, which (in many countries) varies with the price of bread. Accordingly it has often been observed that bad harvests are followed by a decline in the birth-rate and *vice versâ*. Thus the year 1817, in which the price of corn in Belgium rose to twice the average of the neighbouring years, was followed by a great decrease of births. Other instances are referred to by Quetelet (*Physique Sociale*, bk. ii. § 6) and Haushofer (*Lehr- und Handbuch der Statistik*). The Swedish statistics, extending over more than a century, have been arranged in such a way as to bring out the connection between good or bad harvests with many or few marriages and births (see *Journal of the Statistical Society*, 1862, vol. xxv., p. 140, "Vital Statistics of Sweden," by Mr. Hendriks' Table A; *ib.* 1885, opening address of Sir Rawson Rawson, p. 586). When several good or several bad harvests come together the effect is conspicuous in the case of Sweden. But this law is not universal. It cannot be traced in the case of the United Kingdom of late years (see *Journ. Stat. Soc.*, 1890, p. 257 *et seq.*) and in other cases where the price wheat is not the main factor of prosperity. (*b*) The fecundity of marriages depends partly on the age of the parties. This subject has been discussed by Dr. Ogle (*Journ. Stat. Soc.*, 1890, p. 275), who shows that, to cause a sensible alteration in the birth-rate, a very considerable displacement of ages would be required. That other causes beside age are operative is evidenced by the fact that in France and New England the age of marriage is not remarkably late, while the fecundity is remarkably small (see the table at the end of this article). Among causes which may affect the fecundity of marriages are *climate* and *food*. These and other causes are discussed by many of the authorities cited here.

As to the consequences of variations in the birth-rate the most obvious is the tendency of population to increase more rapidly when the birth-rate is high (and *vice versâ*). But this tendency may be counteracted by a high death-rate. That a high birth-rate is not a consequence of a high death-rate, though to some extent causally connected therewith, is maintained by Dr. Noel Humphreys in the *Journal of the Statistical Society*, 1874. The two phenomena frequently co-exist. Thus the statistics of the Austrian empire compiled by Hain (*Statistik des Österreichischen Kaiserstaats*, 1852-3) exhibit birth-rates, marriage-rates, and death-rates varying concurrently. Moving through the provinces along a line in a south-easterly direction you would find the three factors constantly increasing together. The increase of the population (the natural increment, abstracting the effects of emigration and immigration), is therefore not in general proportionate to the birth-rate. Thus the birth-rate of Russia for the period 1865-1883, viz. 4·94 per 100 living, was much greater than the birth-rate for England and Wales, viz. 3·51; yet the annual excess of births over deaths per cent of the whole population was the same for the two countries, viz. 1·37 (see table subjoined). The natural increment for England

and Wales for 1871-1881 was greater than that of the previous decade by about 10 per cent (of the natural increment); while the birth-rate increased very slightly, by about ·3 per cent (census for 1881 general report). There is reason to think that the state of a country in which a high birth-rate is matched by a high death-rate is not satisfactory.

See in addition to the authorities cited Prof. Marshall, *Principles of Economics*, bk. iv. ch. iv. 5th ed. Some examples of the statistics quoted by him are here subjoined.

Mean Annual Birth-rates, Urban and Rural Areas

URBAN

20 large towns, with an aggregate population of 9,742,404 persons at the date of the Census of 1901.

Period.	Calculated on the total population.	
	Rate per 1000.	Compared with rate in 1870-72 taken as 100.
1870-72	36·7	*100·0*
1880-82	35·7	*97·3*
1890-92	32·0	*87·2*
1900-02	29·3	*81·2*

RURAL

112 entirely rural registration districts, with an aggregate population of 1,330,319 persons at the date of the Census of 1901.

1870-72	31·6	*100·0*
1880-82	30·3	*95·9*
1890-92	27·8	*88·0*
1900-02	26·0	*82·3*

F. Y. E.

BIUNDI, G. Known as the author of a treatise on political economy; *La economia esposta nei suoi principii ragionati e dedotti*, Milano, Maisner and comp., 1864.

Author besides of the following works and articles:—"Dell' influenza che esercitano le privative nell' industria," published in the review *Empedocle*, Palermo, 1853, vol. iv. fasc. 7-10, p. 324.—"Sul credito agricolo e sull' istituzione d' una banca territoriale in Sicilia," Palermo, 1854, *Empedocle*, vol. iv.—"Studii sulla pubblica beneficenza," Palermo, 1855, *Empedocle*, vol. v. p. 187. —*I Porti franchi, riflessioni economiche*, 1 vol., Palermo, 1857, Grimaldi.—"Della proprieta intelletuale, e del diritto di copia," Palermo, 1859, *Empedocle*, nuova serie, vol. i.—"Popolazione e miseria," Palermo, 1859, *Empedocle*, nuova serie, vol. i. p. 299.—"Monti di Pietà," Palermo, 1859, *Empedocle*, nuova serie, vol. i.—*Sugli asili infantili e sul modo di istituirli e regolarli in Sicilia; discorso*, Palermo, 1860, Lo Bianco.—*Statistica del pubblico insegnamento in Sicilia*, Palermo, 1861, in 8vo.—*Sulla scienza statistica e sue applicazioni alle forze morali e materiali dei varii Stati d'Europa e specialmente del regno d'Italia*, Firenze, 1867, in 8vo.

M. P.

BLACK, DAVID (about 1700), a Scotch writer, was the author of *An Essay upon Industry and Trade, shewing the Necessity of the One, The Conveniency and Usefulness of the Other, and The Advantages of Both*, Edinburgh, 1706. This treatise shows very clearly the state of economic opinion in Scotland before HUME and SMITH. The author repeats all the traditional dogmas concerning the balance of trade and the necessity of increasing the quantity of money. He opposes, however, the schemes of "credit upon a land security," by maintaining that "the nation's industry is the best fund of credit to support it" (p. 3). After all his mercantilist views it is very remarkable to find him saying; "I do confess it is my private Opinion that all Imposition whatsoever should be taken off Trade, and that there should be no Taxes upon it. . . . For it's Evident, when heavy Duties are upon Goods, some Merchants run these Goods without paying any Duty, and then they Undersel their Neighbours who pay it. . . . Whereas, by an Exemption of all Duty and a freedom of Trade, (with this Caution alwise, That what is superfluous may be Prohibit), then every Merchant will be on equal footing; and he who is most Capable to manage a Trade, will have the most Advantage, and all will redound to the Merchant's Interest" (p. 27). Black proposes to remedy the deficiency in the public revenue by an imposition upon "probative writs, except Bills of Exchange," or if this should not suffice "the Land tax should be thought the surest Fond." He seeks to convince the landed interest that the merchants, though advancing the amount of the duty in the price of the goods, shift the charge upon the buyers, and that the landed men bear indirectly, through this course, a heavier burden than by the way he proposes. Black illustrates the advantages of a free trade by the examples of the Grisons and Holland (pp. 29, 30), the first of which had been suggested to him by Bishop Gilbert Burnet.

[See Bishop Burnet's work: *Some Letters Containing an Account of what seemed most remarkable in Travelling through Switzerland, Italy, some parts of Germany*, etc. Rotterdam, 1687, p. 306.] S. B.

BLACK DEATH, THE. The pestilence or series of pestilences known by this name took place in the middle of the 14th century, and was a partial if not the chief cause of very vast economic changes in England. So far as can be ascertained, the disease first manifested itself in central China in 1333, and thence spread in a westward direction towards Europe, where its force was first felt in the southern countries. Taking a northward course, it reached England where, "about the 1st of August 1348, it began in the seaport towns on the coast of Dorsetshire, Devonshire, and Somersetshire, whence it drew up to Bristol, . . . whence it came to Oxford, and about the 1st of November it reached London, and finally spread itself all over England" (Barnes, *History of Edward III.*, pp. 435, 436). There were three great attacks of the pestilence, of which the

first was much the most destructive—August 1348 to summer 1349; August 1361 to May 1362; July 1368 to Michaelmas 1369. The period during which Europe was devastated by this plague was remarkable for the occurrence of great natural convulsions such as earthquakes, with which contemporary opinion attempted to connect it causally, and for other pestilences, attacks of which took place in 1370, 1381-82, 1396. Of its nature many descriptions remain (Hecker, *Epidemics of the Middle Ages*). Whilst the name it bore in England was derived from one of its symptoms, its terrible destructiveness won it its Italian title of *La mortalaga grande* (Hecker, p. 2).

It is of some importance when examining its economic effects to attempt to ascertain the extent of the mortality which it occasioned. This is very differently estimated. The loss of life in Europe has been roughly reckoned at 25,000,000 (Hecker). While, with regard to England, accounts nearly contemporary give estimates which cannot but be regarded as exaggerations, *e.g.* Adam of Usk reckons the survivors as but one-tenth of the previous population. In more recent times attempts have been made to found conclusions on such statistical data as may be still extant. Arguing from the clergy lists, Mr. Seebohm places the number of deaths as at least one-half. He assumes that the rate of mortality among the clergy was not exceptional. Taking then an estimate of the population living in 1377, drawn from the receipts of the poll tax in that year, he concludes that those who died numbered some two millions and a half (*Fortnightly Review*, vol. ii. pp. 149, 268). On the other hand Professor Rogers, having regard to the quantity of wheat consumed, considers that the loss of life was by no means so great. It is possible, however, that this conclusion does not allow sufficiently for the other cereals which entered into the consumption of the great body of the people; and the data on which it rests seem less certain than those by which Mr. Seebohm was guided (*Fortnightly Review*, vol. iii. p. 191). But whether the one or the other estimate be accepted, there can be no doubt that a very great loss of life was the consequence of the Black Death. Equally there is no doubt as to the magnitude and critical importance of the economic change which it was instrumental in producing.

For some time there had been in operation two processes of widely differing tendency. By slow but certain degrees fixed money payments were being substituted for the labour rents or services originally due from the tenants to the lord of the manor. Disproportion between the money payment and the services had been manifesting itself. It was to ensure the continuance of the former substitution that the tenants began to form those "alliances" and "congregations" to which we find allusion in later statutes (*e.g.* 1 Rich. II. c. 6). To a people thus placed the loss of a *very* large portion of the working population could not but be of the utmost gravity. The force of the economic laws of supply and demand in relation to wages began to make itself felt. There was a demand for much higher wages and an inclination to enforce this demand by combination on the part of the labourers, while the landowners on their side found themselves in need of labour as before, but unable to obtain it at the old rates. The payments which they received in lieu of labour services were insufficient for the hire of the labourers who might perform these services. As a matter of fact, this had naturally tended to be the case even before, but if it had been so before how much more was it the case now. In one instance the tenant paid in commutation ½d. while the labourer who performed the work received 3d. (*Archæologia* xi.)

But now legislation intervened. Hitherto rates of wage, when determined, had been settled in the manorial courts, or by Corporations and Gilds, but wages form the subject of the royal ordinance of 1349 (23 Edward III.) enacting "that all able-bodied servants should serve their lords, or if not required by them, any one so requiring them at the same wages as were usual before the plague." There seems little room for doubt as to the immediate connection in which this ordinance stands towards the Black Death. But legislation was ineffectual. Wages did not diminish; even before the pestilence they had been gradually increasing, and the landowners were driven to seek a new remedy. They made the endeavour to revert to the old system of labour rents. Commuted service on the land was to be done away with, and the practice of earlier centuries was once more to be followed, but now to be followed by those who regarded its introduction as an innovation. In some instances indeed it would appear that attempts were made at illegal exaction, for we find the customary tenants appealing as against their landlords to the record of Domesday. The whole country was thrown into a condition of economic disorder, for the tendency toward resistance was fanned by the efforts of the friars who carried the news from shire to shire, playing the part of the newsagents of discontent. So matters stood just before the rising in 1381. Demands were made with increasing persistence for the reduction of the money payments; the landowners on their side, finding even these payments insufficient, were striving to return to the system under which the various classes of tenants had to perform service in person or by substitute; while in the third place the long French wars had increased the burden of taxation under which the nation was groaning. The universality with which these three causes

were felt, and the part which the friars played in enabling the inhabitants of the various districts to enter into communication with one another, explain the PEASANTS' REVOLT, 1381. The incidents of the rebellion and the mode in which it was met and the means by which it was suppressed are matters of political history. What were the consequences of the rising? During the struggle the rebels had destroyed many of the manor rolls, showing most clearly their desire of blotting out all record of the service which might be exacted from them; and despite the revocation of the royal grants made to them, their demand in this direction was substantially conceded. The practice of commutation was adhered to. In addition it is probable that the money payments, which even before the Black Death had been diminished, on many estates underwent reduction. Thus the second means of dealing with the economic consequences occasioned chiefly by the mortality owing to the pestilence had failed, and economic laws asserted their strength. There were, however, results consequent on the failure of these two attempts at interference. The system of cultivation had depended for its profit on the existence of a large body of cheap labour. The value of labour had been enhanced by no cause more effectually than the diminution in the supply. From this time we may date the change from arable to pasture which assumed such great proportions in the 16th century. The last stage of the mediæval system of cultivation was beginning.

It is somewhat difficult to determine the *exact* importance of the Black Death in bringing about the change. As we have seen, causes were already in operation which tended toward change; but that change was undoubtedly precipitated by the great and sudden loss of life endured by the nation in the middle of the 14th century. This then is the reason why the Black Death deserves so much attention on the part of the economic student. The causes of the events clustering around it display the strength of economic forces; the attempts at regulation, the uselessness of ignorant interference; and in its consequences we find the causes of the peculiar development of AGRICULTURE IN ENGLAND in the Tudor period.

[Rogers, *History of Agriculture and Prices.*—Nasse, *Ueber die mittelalterliche Feldgemeinschaft und die Einhegungen des 16 Jahrhundert in England.*—Denton, W., *England in the Fifteenth Century.*—W. von Ochenkowski, *Englands wirthschaftliche Entwickelung im Ausgange des Mittelalters.*—*Fortnightly Review*, vols. ii. iii. iv. (1865-66).—Hecker, *Epidemics of the Middle Ages.*—Barnes, *History of Edward III.*] E. C. K. G.

BLACKLEG. (1) A card-sharper or forger; (2) a person who works for an employer whose regular workmen are out on strike. These persons are often exposed to great annoyance from the strikers, but they are somewhat protected by § 8 of the Conspiracy and Protection of Property Act 1875 (38 & 39 Vict. c. 86), which enacts that a person who for the purpose of preventing a lawful act (1) uses violence or intimidation; (2) persistently follows the person concerned from place to place; (3) hides his tools or other property; (4) watches his house or the place in which he works; (5) follows him in the company of others in a disorderly manner through a street, is liable to a fine of £20 or to imprisonment for three months with or without hard labour (see STRIKES). E. S.

BLAIRIE, DROIT DE. A right of the French lords to exact payment for leave to graze on open or waste lands within their territories. This right only existed in provinces regulated by *droit coutumier*.

[De Tocqueville, *France before the Revolution* (London, 1873), note lxxvii.] R. L.

BLAKE, WILLIAM, F.R.S.; author of—

Observations on the Principles which regulate the Course of Exchange, and on the Present Depreciated State of the Currency (London, 1810); *Observations on the Effects produced by the Expenditure of Government during the Restriction of Cash Payments* (London, 1823); and of *Observations in reply to a Pamphlet by the Rev. Richard Jones, on the Assessment of Tithes to the Poors' Rate* (London, 1839). F. Y. E.

BLANC, JEAN JOSEPH LOUIS, born at Madrid, 1813, died at Cannes, 1882. His first work for some years after the Revolution of 1830 was in journalism; he wrote in *Le Progrès du Pas-de-Calais* and in *La Revue démocratique*, then in *La Nouvelle Minerve*, all republican journals. Afterwards he became chief editor of *Le Bon Sens*, and then founded *La Revue du progrès social*, in which appeared, in the year 1839, the articles which, collected and extended, formed the volume entitled *L'Organisation du travail*, which made the reputation of Louis Blanc as leader of the socialist school. He afterwards employed his unquestioned talent as a writer on two works, the one, *Histoire de dix ans*, a pamphlet in five volumes, assuming a historic form, and directed against the monarchy of July; the other, *Histoire de la révolution française*, three volumes of which had appeared when the Revolution of February 1848 broke out. Elected a member of the provisional government, as he could not obtain the formation of a "ministère du progrès," he was appointed president of a "Commission de gouvernement pour les travailleurs," which he established in the palace of the Luxembourg in the Chamber of Peers. This commission was composed of delegates from the working classes, supported from outside by 100,000 bayonets. In its discussions he put forward with a too feverish eloquence, considering what the character of his audience, and of the unsettled period then passing, was, the most revolutionary and socialistic ideas. This did not hinder

Wolowski from having the courage to oppose him face to face in debate. Did Louis Blanc contribute to the formation of the *ateliers nationaux* of unhappy memory, the dissolution of which brought on the insurrection of June 1848? This has never been proved. Louis Blanc denied it vigorously. His powers expiring with the opening of the National Constituent Assembly, he became only an ordinary "representative of the people;" but he had to pay for the rashness of his language during the discussions at the Luxembourg, the consequences of which he could not escape, and suffered in reputation more from his speeches when president of the "Commission des travailleurs" than on account of his acts after he ceased to hold that office. When the invasion of the chamber of the 15th May 1848 occurred, he had to take refuge in England, whence he did not return till 1870. Before doing this he had founded a journal, *Le Nouveau Monde*, which had only a very limited success (1849-51). He then wrote in the French journal *Le Temps* (the second of that name) letters on London, which were much remarked on at the time. On his return to France he was returned a member for Paris to the National Assembly, and subsequently of the Chamber of Deputies. He was a rhetorician and a philanthropist rolled into one. "C'était un rhéteur doublé d'un philanthrope," said M. G. de Molinari, of him. With a warm heart and a bad judgment, Louis Blanc was not a man for action: he dreamed of the absorption by the state of factories and shops in which work was suspended at the time. He proposed to make use of these by handing them over to the working men, under the direction of the state, in order that they might ruin by their rivalry the factories and shops which still held on, so that, some day or other, the state should become the sole mainspring of industry. The division of profits (no one imagined that losses could occur) was to be made in the following manner. There were to be no more any wages—wage-receiving being abolished—but every one was to receive "according to his wants." This very simple method of division was the first proposed by Louis Blanc. When he became president of the "Commission de gouvernement pour les travailleurs," he modified this method and replaced it by another more simple still; an equal division per head. Honour was in his eyes a sufficient inducement to labour, and more efficacious than self-interest. He had less knowledge of technical details than his brethren in socialism, and his proposals were always surrounded by a mist of vague uncertainty which renders a critical appreciation of them both difficult and at the same time little conclusive. The collectivists in our days, though on the wrong path, have gone more to the bottom of their subject.

[While in England he wrote, in English, his book entitled,—*1848. Historical Revelations, inscribed to Lord Normanby.* By Louis Blanc. Chapman and Hall, 1858.] A. C. f.

BLAND ACT. A law of the United States passed 28th February 1878, which restored the silver Dollar of 412½ grs., $\frac{9}{10}$ fine, to the list of coins of the United States, and directed the secretary of the treasury to purchase silver bullion, and coin into such dollars not less than two million dollars' worth (say £400,000), and not more than four million dollars' worth (say £800,000) per month continually. By the Coinage Revision Act of 12th February 1873 the gold dollar of $25\frac{8}{10}$ grs., $\frac{9}{10}$ fine, was declared the Unit of Value in the United States, and the silver dollar was omitted from the list of coins authorised to be struck at the mint. This act did not make mention of any dollar, with the exception of the *trade dollar* of 420 grs., $\frac{9}{10}$ fine, manufactured for the trade with China; it ordained that the gold coins should have unlimited paying power, and that the silver coins should have paying power up to the amount of five dollars. That portion of the act of 1873 which made the gold dollar the unit of value was not altered by the act of 1878, but under it the silver dollar became legal tender to an unlimited amount, "except in cases where it is strictly stipulated otherwise in the contract." The act of 1878 likewise authorised the issue by the treasury, on the deposit of coined silver, of silver certificates of deposit in denominations of ten, twenty, fifty dollars, etc. Under this act $299,708,790 (say £60,000,000) had been coined in silver dollars up to 30th June 1888, but of these $243,879,487 (say £48,700,000) remained in the treasury on that date. Against this stock of coined silver certificates to the value of $229,491,772 (say £45,800,000) had been granted, but of these $29,104,396 (say £5,820,000) were in the treasury (see *Report of the Director of the United States Mint*, 1888, pp. 74, 203). The effect of the Bland Act has been to cause a large portion of the legal tender of the United States to be held in silver; the total metallic stock being estimated on 1st November 1888 approximately as:—

	Cost Value.	
Gold	$711,705,050	say £142,300,000
Silver	$396,970,484	,, £79,400,000
	$1,108,675,534	,, £221,700,000

The Bland Act is sometimes termed the "Allison Act."

By an act of Congress passed 14th July 1890 the provisions of the Bland Act, which required the monthly purchase and coinage into silver dollars of not less than $2,000,000, and not more than $4,000,000 worth of silver, were repealed, and the secretary of the treasury was directed to purchase silver bullion to the extent of 4,500,000 oz. monthly at a price not exceeding $1 per $371\frac{25}{100}$ grs. of pure silver, against

which silver treasury notes were to be issued. It was left to the secretary of the treasury, at his discretion, to redeem these notes in gold or silver coin, it being, the act continues, "the established policy of the United States to maintain the two metals on a parity with each other upon the present legal ratio, or such ratio as may be provided by law." The legislation in question doubtless exerted an important influence in decreasing the gold and increasing the silver coin and bullion in the United States. Silver interests obtained no further important concessions from the government until after the country entered the World War, when, in order to furnish silver to Great Britain for use in India, it was proposed to retire silver certificates issued against coin and bullion purchased under the Bland Act and the Act of 1890. Mining interests then opposed such action, unless accompanied by an agreement on the part of Congress to repurchase as much silver as was parted with it. This led to the so-called Pittman Act of 1918, in which provision was made for turning over to Great Britain the silver behind some $208,000,000 outstanding silver certificates. The buying provisions of this Act went into effect on 1st June 1920, and the Treasury purchased silver of domestic origin until the total amount should equal the sum which had been released, at a fixed price of $1 per ounce. These purchases were continued until July 1922, notwithstanding that the price of silver during the latter part of the time had fallen to a figure between 63 and 67 cents per ounce.

The amount of silver tendered and accepted in each fiscal year under the terms of the Act is as follows (in ounces, 00,000 omitted): 1920, 6·5; 1921, 54·2; 1922, 56·6; 1923, 83·2. Total, 200·5.

Recoinage of silver dollars began in February 1921. The numbers coined in each fiscal year (00,000 omitted) were: 1921, 19; 1922, 92·4; 1923, 110·7; July to October 1923 inclusive, 5·8. Total, 227·9. H. P. W.

BLANK CREDIT. Credit given by a banker on the personal security of his client. One form of blank credit which is frequently granted by continental banks and foreign banks established in London consists in the acceptance of drafts issued by the customers or for their account on the understanding that they will cover the same before maturity. The drawer of such bills can discount them on the strength of the banker's acceptance, and the banker can give credit without any cash outlay.

BLANK ENDORSEMENT. A bill of exchange endorsed in blank, the meaning of which is that a bill on which the endorser has only signed his name becomes payable to bearer, and is negotiable by mere delivery (see BILL OF EXCHANGE). See also for further particulars *The Practice of Banking*, by John Hutchison.

BLANK TRANSFER. A deed purporting to assign the property in shares or other registered securities in which the transferee's name is left in blank. A document of this nature is frequently used in cases of sale or pledge, and, if accompanied by the certificate relating to the security to which it refers, generally authorises the holder to fill in his own name, and to have himself registered as owner of the security. Difficulties may occur when the transferer fraudulently executes several transfers relating to the same security, and in other cases, and the holder of the transfer ought to exercise great care (see Lindley, *Company Law*, p. 471 *seq.*) E. S.

BLANQUI, JÉRÔME ADOLPHE, born 1798, died in Paris 1854. The economist Blanqui, who must not be mixed up with his brother L. A. Blanqui, the revolutionist, was, from 1830 to his death, the head of the École de Commerce of Paris, and in 1833 replaced J. B. SAY as professor of political (and especially of industrial) economy at the Conservatoire des Arts et Métiers. He was elected, 1838, a member of the Académie des Sciences morales et politiques, and represented the department of the Gironde in the Chamber of deputies. Marshal Bugeaud, with whom he was very intimate, thought of making him the civil administrator of Algeria. Blanqui had travelled nearly over all Europe, and only left off travelling when his health compelled him to remain at home. It may be said that the whole of his life was spent in one long and laborious inquiry, principally directed to the solution of those questions relating to the working classes, the importance of which he had realised more clearly than most of his contemporaries. The brilliancy and vigour of his language added an additional attraction to his teaching.

Parts of the course of lectures delivered by Blanqui were published by MM. Blaise and J. GARNIER. Blanqui also was the author of several works. Of these the most important are: *Résumé de l'histoire du commerce et de l'industrie*, Paris, 1826, in 18mo.—*Précis élémentaire d'économie politique*, Paris, 1826 and 1842, in 32mo.—*Histoire de l'économie politique en Europe, depuis les anciens jusqu'à nos jours, suivie d'une bibliographie raisonnée des principaux ouvrages d'économie politique*, Paris, 1838, 1842, and 1845. This last work has been translated into several languages. We may also mention the notices written by Blanqui of the French exhibition of 1827, and particularly that on the great exhibition of London 1851. His researches on the position of French workmen have been continued by M. Baudrillart. Blanqui left behind him several manuscript fragments and studies which it is hoped that his son-in-law, M. Maze, will publish. A. de F.

BLENCH (Scots law term). Lands held

blench are held subject to payment of merely a trifling duty, which is exigible only if asked within the year. Analogous to PETIT SERGEANTY.

BLOCKADE. A blockade may be defined as the prevention of commercial intercourse between a port or a portion of the coast in an enemy's country and neutrals, by means of vessels of war sufficient in number to render any neutral vessel attempting to reach such port or coast liable to capture. A blockade being a belligerent act, must be instituted by sovereign authority, and a naval force must be present to maintain it. The extent of a blockade is determined by the efficiency of the blockading squadron. Some continental writers, such as Heffter (*Das Europaïsche Völkerrecht der Gegenwart*, § 155), and Ortolan (*Règles internationales et Diplomatie de la Mer*, ii. 328) maintain that the blockading force should be anchored, a view that has not been accepted by the prize courts of England and the United States. A blockade is violated by any attempt at ingress or egress, but whilst English and American prize courts hold that the bare act of sailing for a blockaded port is an act of violation, provided there is reason to believe the captain knows of the existence of the blockade, the French practice is to warn the captain on approaching the coast, and only to seize the vessel if a subsequent attempt is made to enter. The penalty for a breach of blockade is the confiscation of the ship, but the cargo is liable to be condemned if its owners are in any way privy to the breach.

The prohibition of commerce with neutrals involved in a blockade is based by Hautefeuille (*Des droits et des devoirs des nations neutres en temps de guerre maritime*, 3d ed. ii. 178, 181) on a supposed conquest of the enemy's territorial waters; by Ortolan (*Diplomatie de la mer*, 2d ed. ii. 293) on an "occupation" of the sea, which gives to the occupier "sovereign rights." Historically the rules of blockade are a modification of the old principle that war was "omnium in omnia et in omnibus," and therefore he who was a neutral was an enemy. All intercourse with an enemy was unlawful. In process of time neutral states made good their claim to a distinct status, and it is now recognised that in time of war the trade of neutral individuals should be as free as in time of peace. This principle, however, comes in conflict with the long established right of a belligerent to cut off commercial communications with the enemy, and the modern rules of blockade are a compromise between belligerent and neutral rights. The right of the neutral subject to trade is recognised in the fact that, by violating a blockade he does not violate the neutrality of his state, and if the vessel escapes he suffers no punishment. The belligerent right is recognised by permitting the blockade to be established, and by authorising the belligerent to confiscate any vessel that may be caught in the act of violation.

A blockade, if on an extended scale, may inflict great injury on neutral states. During the four years that the blockade of the Southern States was maintained by the North American States, the export of cotton to England ceased, and those engaged in the cotton industry suffered great privation, and the exportation of wine from France to the United States became impracticable. Hence the prohibition of commercial blockades, and of the capture of all private property at sea, has been advocated. From an economic point of view it is certainly desirable that the capture of private property should be abolished, but as Fauchille points out (*Du Blocus Maritime*), every act of war affects neutrals, and the arguments for the protection of private property are arguments against the practice of war itself (see DECL. OF LONDON, DECL. OF PARIS, INTERNATIONAL LAW).

[See Calvo's *Droit International*, Paris, 1881; *Du Blocus Maritime*, par Paul Fauchille, Paris, 1882.—Hall's *International Law*, Oxford, 1889.]

J. E. C. M.

BOARD. A body of persons officially constituted for the transaction of some particular business, so called from the "board" or table round which meetings were held. Some government departments are designated by this title, *e.g.* board of trade, board of inland revenue, local government board, poor law board. The term is also applied to the directors or persons charged with the management of a company.

J. E. C. M.

(*Economic Opinion on Boards.*) "Boards," said BENTHAM, "are screens," a phrase which describes very well the extreme position of economists who distrust governmental control in industry. The term is applied to particular departments of the administration of the central government, *e.g.* the board of trade, the board of agriculture; to similar divisions of local government, *e.g.* board of guardians, school board; and also to various permanent committees charged with the supervision of particular industries, *e.g.* the Scottish fishery board. It was one of the main principles of Adam SMITH, that, if governmental control were proved to be desirable, it was better to throw the responsibility on the persons and localities directly interested. The constitution of boards of various kinds is the logical outcome of this principle, the central authority only laying down general rules for guidance.

J. S. N.

BOARD OF AGRICULTURE (1793). Seven years after the reconstitution of the board of trade, the House of Commons, on the motion of Sir John SINCLAIR, voted £3000 a year towards the expenses of a board of agriculture (17th May 1793). The board was duly chartered; it was to consist of certain specified government

officials and lay coadjutors, the latter including Sinclair himself, who became the first president, and Arthur YOUNG, who became secretary. Though the minority in the House regarded the board as simply a new refuge for place-hunters, the enthusiasm of president and secretary carried it into good work at once, and, for a time at least, falsified fears. On its first meeting (4th September 1793) it drew up a plan of inquiry on a large scale. Intelligent farmers throughout the kingdom were to be provided with a list of queries relating to their business which they were to be invited to answer and send to the board, for the general benefit of the agricultural interest. In the second place, in every county some competent person was to be chosen to draw up a survey of the state of agriculture in that county, to be remitted to the board for publication. This plan was duly carried out, and the result was given to the world in sixty or seventy separate publications, of various degrees of merit. The survey of Sussex was by the son of Arthur Young, and the survey of Suffolk by Young himself, who contributed also to the 3d and 6th volumes of *Communications* published by the board between 1802 and 1806. These *Communications* include also papers, letters, or speeches by George Washington, Dr. Priestley, Sir Joseph Banks, Sir Humphry Davy, Morris Birkbeck, Watson, bishop of Llandaff, and Sir John Sinclair, with others of lesser note, English and foreign. One of the objects of the board was to keep England alive to foreign improvements. Another of course was to encourage improvements at home; and, as a matter of fact, the lectures of Sir Humphry Davy, given before the board in 1802, made an epoch in agricultural chemistry. Prizes were given for agricultural essays and experiments. Another object of the board was more general,—to provide accurate statistics of lands, produce, stock, and even population; there is, for example, in vol. ii. of the *Communications*, an "abstract of baptisms and burials" for four of the parishes in each of fifty counties, drawn up in 1800. Both in the *Communications* and in the several Reports for the counties, there is a mass of information, observations, and opinions, not only in regard to the technical points of agriculture and pasture, but in regard to the poor law, the condition of the poor labourer and the farmer, the incidence and amount of rent, rates, and tithes, the progress and effects of enclosures, the movements of population, and the working of such experiments as the system of small allotments. Accordingly these volumes contain materials for the social and industrial history of the country districts of the kingdom, which are of undoubted value though they have been little utilised.

A general view of the work of the board for its first three years is given in the first volume of the *Communications*, which contains also the text of the Charter of Foundation, dated 23d August 1793. The grant of £3000 was withdrawn in 1817, a year of distress when the government was much pressed to reduce expenditure. No doubt the Smithfield Club, the Highland Society, the Bath and West of England Agricultural Society and other private bodies were doing its work equally well; but it is not just to describe the board as simply "the pet scheme of King George" with no life of its own (Martineau, *Thirty Years' Peace*, iv. 448). In 1889 it was re-established, and in 1903 assumed in addition the duties of the Board of Fisheries then constituted (see below).

[*Reports to Board of Agriculture from the several counties* (var. dates).—*Communications to the Board of Agriculture*, 1802-6, 6 vols.—*History of the Progress of Great Britain*, R. K. Philp, 1859 (specimens are given of the queries to farmers, p. 117).—M'Culloch's *Literature of Political Economy*, 1845 (a list of surveyors is given, but not in a useful or accurate form, p. 215)—*Correspondence of Sir John Sinclair*, vol. i. 406-407, etc.—*Life of Sir John Sinclair*, i. 253, etc.—*Annual Register*, 1793, p. 118.—R. E. Prothero's *English Farming*, 1888, p. 69.] J. B.

BOARD OF AGRICULTURE AND FISHERIES. A Board of Agriculture for Great Britain was re-established 12th August 1889. In 1903 certain powers and duties formerly exercised by the Board of Trade with respect to fisheries were transferred to this department, the designation of which was at the same time altered.

There are transferred to this Board the duties of the Privy Council under the Destructive Insects and Contagious Diseases (Animals) Acts, the duties of the land commissioners for England under the TITHE commutation acts, the COPYHOLD acts, the acts for inclosure, exchange and improvement of land and other acts, and those vested in the Commissioners of His Majesty's works and public buildings under the Survey Act, 1870. The Board undertakes the preparation of statistics relating to agriculture and forestry and the industry of fishing. It may also undertake the inspection of any schools, not public elementary schools, in which technical instruction, practical or scientific, is given in matters connected with these subjects, and the aiding of any school which admits such inspection and is qualified to receive such aid, the aiding and inspection of courses of lectures and instruction, and examinations in these subjects, and the encouragement of such experiment and research as they may think important for the purpose of promoting agriculture, forestry, or the industry of fishing. The muzzling and keeping dogs under control are among the duties of the Board with the Contagious Diseases (Animals) Acts, and it is also stated that in the act establishing it, the expression "agriculture" includes horticulture.

The Board are charged with the duty of providing small holdings and allotments in England and Wales (see Small Holdings Act, 1907), and of carrying out the English share of the international investigation of the North Sea. They have also important duties under the Fertilisers and Feeding Stuffs Act, 1906, and the Butter and Margarine Act, 1907. Useful work has already been done in connection with agricultural education and small holdings (see AGRICULTURAL HOLDINGS ACT, App.). Instruction in dairying, in poultry and bee-keeping, in horticulture, in the management of orchards and fruit trees, and in school or other gardens, has been provided at many centres throughout England and Wales.

The president of the Board may have a seat in Parliament.

[See AGRICULTURE AND FISHERIES, MINISTRY OF, in Appendix.]

BOARD OF TRADE.* Great Britain possesses no ministry of commerce nor any department specially charged with the superintendence of industry. The home office has some supervision over factories and workshops, mainly as to hours of labour of women and children, fencing of dangerous machinery, and sanitary condition of buildings. It publishes returns of the principal textile industries, but with no details of quantities or values of what is produced, and superintends coal and other mines in regard to safety, and it is not concerned with other matters as important to them—namely, the rates charged for conveying minerals by railway and royalties payable to original owners. In connection with manufacturing industries the science and art department gives some assistance through the South Kensington and other museums, and technical schools. With these exceptions there is little supervision over commerce and industry, except by what was originally the committee of privy council for trade and is now known as the "board of trade." Temporary councils had advised parliament concerning trade matters since the 14th century, but no permanent department was established until Cromwell instituted such a department to foster trade and navigation, and check the monopoly of the Dutch. This policy was continued after the Restoration, a committee of the privy council being appointed, 1660, to ascertain particulars of imports and exports and to improve trade. Another committee was appointed a few years later to assist the crown in forming and managing "foreign plantations," *i.e.* colonies. The Earl of Sandwich was president and John EVELYN one of the ten members of this second committee. In 1672 these two committees were united as a standing council of trade and plantations under the presidency of the Earl of Shaftesbury, and, in 1673, John LOCKE became secretary. The joint commission lasted, however, only two years, and was not revived till 1696. Locke then returned to office, though unwillingly, as one of six unofficial paid members of the board, eight principal officers of state being unpaid members. The questions referred to the establishment included inquiries into hindrances to trade, employment of the poor, and the silver currency, the great recoinage of which, 1695, was supported by Locke's writings. The new board were hardly settled in their rooms at Whitehall, altered for them by Wren, when the fire of 1697 drove them to take refuge in the building known as the Cockpit, on the site of the present council office. In 1700 Locke was compelled to resign through ill-health (*Life of Locke*, by Fox Bourne). Locke's successor was Matthew Prior, well known in his literary capacity.

The navigation acts and the mercantile system were at this time the keystones of our commercial policy. Raw materials might be imported free of duty, and with a bounty in some cases, but heavy penalties usually prohibited their exportation. In the case of wool, even movement from village to village within a few miles of the coast was prohibited. British colonies were favoured by DISCRIMINATING DUTIES, but when conflicts arose between the interests of home manufacturers and colonists, the latter usually went to the wall. A secretary of state for the colonies to undertake the control of the plantations was appointed 1760. This control passed, 1782, to the home secretary, 1801 to the war department, 1854 to the present colonial office. ADDISON was for a few years one of the lords commissioners of trade previous to his appointment in 1717 as secretary of state to George I. Gibbon, the historian, was made one of the eight lords commissioners in 1779 at a salary of £1000 a year, but was ousted three years after, mainly through BURKE's attack on the public offices 1780. (COBBETT's *Parliamentary History*, vol. xxi. p. 232.) The contest between Burke and the ministry was, as regards the board of trade, whether unpaid commissioners of trade, chosen from time to time, would not be preferable to a permanent highly-paid council, which Burke described as "a sort of gently-ripening hot-house, where eight members of parliament receive salaries of a thousand a year in order to mature at a proper season to a claim for two thousand." Burke's motion for the abolition of the board of trade and the colonial and other offices was carried in the House of Commons by a majority of eight. Reductions resulted of between £200,000 and £300,000 a year, including £11,000 for the board of trade. Another *permanent* committee of the privy council was formed in 1786, by order in council which still mainly regulates the legal constitution of the office. The duties of the revived board were chiefly as a century

before, with questions relating to food supply and restrictions on the exportation and importation of corn.

Experience of difficulties in administering any SLIDING SCALE of corn duties had much to do with disposing the board towards a free-trade policy. Mr. HUSKISSON's efforts in removing restrictions on foreign trade, followed by Mr. Gladstone's (1842) carrying out PEEL's tariff reforms were ably seconded by the permanent staff, including Mr. G. R. PORTER and Mr. MACGREGOR. Porter was the founder of official statistics, the accounts published by government before he became chief of the statistical department, 1832, having been merely crude and undigested masses of figures. The *Progress of the Nation* made him famous as an economist and he was made secretary of the Board of Trade 1847. Sir R. Giffen, afterwards an assistant secretary, became chief of the statistical and commercial department 1876. Meanwhile, as state supervision over food supply and general trade became obsolete, joint-stock companies, railways, and shipping required supervision, and further changes were made, the president being practically secretary of state for trade. The vice-president became, 1867, a parliamentary secretary with similar duties to those of a parliamentary under secretary of state. Efforts have been made to change the title of the office into "Ministry of Commerce" presided over by a titular secretary of state, but a more obvious improvement would be to incorporate with the board some consultative members of technical knowledge and trade experience, such as eminent shipowners, merchants, and manufacturers, who could be called in to advise the president.

The departments must be described somewhat in detail.

1. *The Commercial Department* [see COMMERCIAL INTELLIGENCE BRANCH in Appendix] deals with commercial questions generally. It provides the statistical abstracts for the United Kingdom, the colonies, and foreign countries: trade, shipping, railway, and emigration statistics, including a record of price of corn, foreign and colonial customs, tariffs, and trade regulations; keeps the standards of weights and measures, and controls the registration of joint-stock companies. A *Monthly Journal* gives commercial information principally from official sources.

A separate Bankruptcy Department has been organised since the Bankruptcy Act of 1883. The principle of this act is administration of bankrupts' property by or under a department amenable to parliamentary control (see BANKRUPTCY LAW; DEED OF ARRANGEMENT).

2. *The Railway Department*, established 1840, inspects railways before opened, reports on proposed railways, accidents, by-laws, arbitrators, and other duties under various railway acts. The Railway and Canal Traffic Act (1888) in regard to rates for conveying goods; tramways, their by-laws, and "provisional orders," *i.e.* omnibus bills approved by some public department before being submitted to parliament come under this department, with gas and water schemes, electric lighting, and copyright. The patent office, a subordinate department, has charge of PATENTS, designs, and TRADE MARKS.

3. *The Marine Department*, established 1850, regulates the survey of passenger steamers, compulsory examination of masters and mates, shipping offices for engagement and discharge of seamen, and generally all questions relating to ships and their crews, including the detention of unseaworthy ships and inquiries into wrecks. It also deals with international arrangements connected with the Police of the North Sea and other fisheries, and matters relating to fishing vessels and their crews. Certain powers and duties formerly exercised by the Board of Trade with respect to fisheries were in 1903 transferred to the BOARD OF AGRICULTURE AND FISHERIES (*q.v.*).

4. *The Harbour Department* has charge of foreshores belonging to the crown, and protects navigable harbours and channels, lighthouse funds, Holyhead and Ramsgate harbours and Dover pier. Wreckage and quarantine are also under the charge of this department, and standards for weights and measures, and hall marks.

5. *The Finance Department* deals with the accounts of all branches of the Board of Trade, of harbours, lighthouses, and mercantile marine offices, merchant seamen's fund, consuls' accounts for disabled seamen abroad; marine savings banks and seamen's money orders, life insurance companies' accounts and bankruptcy estate accounts.

BOARDING-OUT SYSTEM. The boarding-out system is one of several attempts to solve the problem of training pauper children, and is practised in the United Kingdom, in France, Germany, Russia, Switzerland, Canada, and the United States. In relieving adult paupers the main object may be said to be, to make the condition of the pauper as little enviable as possible; in the case of pauper children there is a further aim, viz. to prevent the permanence of a state of pauperism, and to train good citizens. Various methods have been suggested to attain these ends. It was at one time the custom to keep children in workhouses, in a separate part of the building from aged and adult paupers, under instruction and discipline. The evils of this system, which are possibly exaggerated, lie in the danger lest a child should acquire the so-called "pauper taint"—that is, a predisposition to relapse into pauperism. To this must be added a total ignorance of the world, due to artificial surroundings, which not only unfits a child for any walk in life, but makes him an easy prey to temptation. These evils are now, as a general rule, modified by the practice of sending children to the ordinary parish schools. The first real reform in the system was the establishment of district schools in which the children of one or more unions are boarded and educated. The results of the training given in such schools are very favourable, a comparatively small percentage of the children becoming paupers in later life. Against

them it is urged that individuality is lost, that the training given is too mechanical, that the little incidents of daily life are wanting, so that no sense of property is acquired, that they are favourable to the development of certain diseases, *e.g.* ophthalmia, and that the diet lacks variety. A further modification is seen in the building of villages, consisting of cottage-homes, in each of which a small number of children form an artificial family, but an objection to this system lies in the cost. It is claimed for the boarding-out system that, whilst avoiding the above-mentioned evils, it has great advantages of its own. Thus children are placed in ordinary families, are adopted by foster-parents carefully selected, who lodge, board, and clothe them in return for a weekly payment by the guardians, and who are under close supervision. Thus the "pauper taint" is wholly absent, and the advantages of home life are secured to the child; the relations between the foster-parents and the children often develop into real affection, and the tie between them is as strong or stronger than that in ordinary families: the surroundings are precisely those in which a child will find itself in later life, for which therefore it receives an appropriate training. Lastly, it is far cheaper than any other system. Thus, the cost of maintenance of a child in a workhouse may be set at 4s. 10d. weekly, exclusive of the cost of buildings, etc., the weekly cost in a district school at 8s. 6d., in a cottage-home at 9s. 5d., on the boarding-out system at 4s. 3d. Two kinds of difficulty suggest themselves. First, the practical difficulty of securing adequate supervision. The supervision is partly in the hands of volunteers, partly of union officials, subject to inspection by an official of the local government board. The reports of this last, Miss Mason, though on the whole encouraging, show that lamentable shortcomings are not uncommon, for instances are quoted of neglect and even cruelty on the part of foster-parents. To this may probably be attributed the small extent to which the system has been adopted, and its unpopularity among the poorer classes. The second objection is one of principle. Under this system the children of paupers are placed in a better position than the children of independent labourers, the amount expended upon them being larger than these last can possibly afford. Hence the motive to support his own family is weakened on the part of the ordinary man by the sight of the superior provision made for the family of his improvident neighbour, and a direct incentive is given to an increase of population by recklessly early marriages.

The boarding-out system is regulated by two orders of the Local Government Board, issued in 1889, which superseded the orders issued in 1870 and 1877. Under these orders orphan and deserted children, or the children of permanent inmates of a workhouse, and others who are practically orphans, may be boarded out: (1) outside the union to which they are chargeable, in which case they are under the supervision of a certified committee; or (2) inside the union, when the responsibility is shared by a committee and the officers of the union. The total number of children boarded out in England and Wales on 1st January 1890 was 4366. In 1909 it was 8653; in 1911, 9669.

[The Association for promoting the Boarding-out of Pauper Children has published numerous reports, etc., on the system. Discussions upon it are to be found in almost every annual report of the Poor-Law Conferences, and the history of the movement may be traced in the annual reports of the Local Government Board, Part I.] L. R. P.

BOCCHI, ROMEO, who came from Bologna, published in 1621, at Venice, a book on money, in two volumes, dedicated to the pope Gregory XV. *Della giusta universal misura e suo typo.* The first volume has the sub-title *Anima della moneta*, and the second *Corpo della moneta.* Although very primitive in his views, this author is not uninteresting. M. P.

BÖCKH, AUGUST (1785-1867), the eminent philologist, was author of the classical work on the political economy of ancient Athens, *Staatshaushaltung der Athener*, 1817. This book was translated into English by Sir G. CORNEWALL LEWIS (1828, 2d ed. 1842). Another of Böckh's treatises is useful for the study of the economics of antiquity, namely *Metrologische Untersuchungen über Gewicht, Münzfüsse und Masse des Alterthums*, 1838. J. K. I.

BOCLAND. After the land of England had been distributed among the original German invaders, a considerable surplus remained undistributed, which was regarded as the property of the tribe, and was known as *folkland.* From this private estates were in subsequent times given to individuals, as a reward for eminent services, especially in war. Such grants were made by *boc* or charter, issued by the king and his *witenagemot* or council of wise men: and land so granted was called *bocland.* Bocland could be freely alienated either during lifetime or by will; and we learn from a law of Alfred that it could also be entailed, *i.e.* limited in descent to a single family.

[Stubbs, *Constitutional History*, vol. i. ch. v.—*Essays in Anglo-Saxon Law* (Boston and London, 1876), pp. 55 *seq.*] R. L.

BODIN, JEAN, who was a rival of Machiavelli and a precursor of MONTESQUIEU, was born at Angers, 1520, and died of the plague, at Laon, 1596. His principal work, *De la République* (1577), published originally in French, then translated into Latin by the author himself, has not for its object, as its title might lead the reader to suppose, a panegyric on the republican form of government. While deriving everything from the sovereignty of the people, Bodin

admits that the only practical method is the perpetual alienation of this sovereignty in favour of a monarch and his heirs. He fixes no limits to this alienation, but he desires a "Gouvernement tempéré sans être démocratique." States-General like those at Blois (1576), in the deliberations of which he had shared, with more courage and ability than success, are, in his eyes, the proper remedy for an excess of absolute power. This was, in some respects, the representative monarchy of our days. He also supported the idea, developed later by Montesquieu, that climate has a dominant influence on the form of government; theocratic in the south and east, military in the north, free in the countries lying between these. Maintaining resolutely, through conviction, liberty of conscience, he was also a declared opponent of slavery. In political economy he supported principles universally admitted in our days against a *sieur de Malestroit*, who, had it not been for two pamphlets by Bodin, would be perfectly unknown at the present time (*Réponse aux paradoxes de M. de Malestroit touchant l'enchérissement de toutes les choses et des monnaies*, Paris, 1568, in 4to, and *Discours sur le rehaussement et diminution des monnaies, pour réponse aux paradoxes du sieur de Malestroit*, Paris, 1578, in 8vo). He also published *La Démonomanie* (1587), and other similar works; for, strange as the fact is, this man, of such powerful intellect, was nevertheless a believer in sorcery and witchcraft.

[M. Ad. Franck, in his *Réformateurs et publicistes de l'Europe* (Paris, 1864, in 8vo), has written on Bodin in eloquent terms; but the work through which both he and his books will be best known is the volume of M. H. Baudrillart (*Jean Bodin et son temps*, Paris, 1853, in 8vo).]

A. C. f.

BODY CORPORATE or CORPORATION is an artificial or juristic person which preserves its identity and the rights conferred on it through a perpetual succession of natural persons. Corporations are either *sole* where composed of one person, or *aggregate* where composed of two or more persons. They are also divided into *ecclesiastical* corporations, and *lay* corporations. Of lay corporations the most important are municipal corporations and trading companies. Corporations are created either by charter or by act of parliament, but some base their existence on prescription. Their powers of acquiring, holding, or disposing of property depend partly upon the instrument calling them into existence, and partly upon the objects for which they were created (see CORPORATION, MUNICIPAL; and COMPANIES).

[As to the extent to which a corporation can enter into contracts, see *The Principles of Contracts*, by Sir F. Pollock, London, 1888.] J. E. C. M.

BŒCLER, JOHANN HEINRICH (1611-1672), a German writer, born at Cronheim in Bavaria, was professor of history, philosophy, and politics at Upsala and Strasburg. In his posthumous *Institutiones politicae: accesserunt Dissertationes Politicae ad Selecta Veterum loca et libellus memorialis ethicus*, Argentorati, 1674, Bœcler assails the opinions of GROTIUS on the original community (p. 61), and those of ALTHUSIUS (p. 104) concerning the original sovereignty of the people. His economical opinions on money, taxation, and population are for the most part founded upon BOTERO, BESOLD, BORNITZ, and Gryphiander. The first-named may have suggested his distinction between the arts which assist or hinder the increase of population, trade, schools, and courts belonging to the former, false promises and robberies to the latter (l. iv. c. v. p. 209). Bœcler's dissertation "on the science and study of politics" (p. 503 ff.), in which he deprecates the study of PLATO and recommends ARISTOTLE, gives a curious example of what was the state of the science in Germany in his time.

[See *Allgemeine Deutsche Biographie*, ii. bd. pp. 792, 793.—Roscher, *Geschichte der National-Oekonomik in Deutschland*, 1874, pp. 209, 262, 263.] S. B.

BOILEAU (or BOYLEAU) ÉTIENNE (born about 1200, died about 1272), is said to have been of Angevin origin. He joined the Crusades under Louis IX. (St. Louis), was captured, and ransomed by that monarch at a high price. At one time provost of Orleans; he subsequently became (1258-1270) provost of Paris, by special appointment of Louis IX. who sought a man of sufficient strength and integrity to maintain social and industrial order in Paris. Up to that date the post of provost had practically been farmed out to speculators, who recouped themselves by exactions and the receipt of bribes. Boileau, a man of noble birth and incorruptible character, suppressed venality, meted out vigorous justice, established the police of Paris, and hanged his godson for theft, and a friend for dishonesty. St. Louis, as a mark of confidence and approval, sometimes sat beside him at the Châtelet, where he administered justice. But the great work of Boileau was his compilation, about 1268, of the *Livre des Métiers*, a code of the regulations affecting the various industries of Paris. The exordium states the intention of the compiler, to treat of (1) the trades of Paris, their ordinances and the breaches thereof, with the appropriate fines; (2) fees, tolls, taxes, and dues; (3) justice and jurisdictions in Paris and the neighbourhood. The third part either was not written or has been lost.

The ill-defined privileges claimed by the numerous industrial corporations of Paris had become, in many cases, oppressive and encroaching. Boileau cited before his tribunal representatives of the separate crafts in turn, inquired into the grounds of their privileges,

and reduced their customs to writing in consistent order. The *Registres* so formed constitute a highly valuable record of the condition of industrial society at the time, and exhibit the whole organisation of its hierarchy—trade privileges, masters, apprentices, their number, conduct, terms of service, holidays, quality of work and of goods, prices, middlemen, fines, dues, etc. This compilation has been regarded as a landmark in the history of economics. BLANQUI devoted to it a chapter of his *Histoire de l'Economie Politique* (t. i., ch. xix., 3me ed. 1845), in which, however, he exaggerates the practical influence exercised by Boileau's book. As a repertory of economic police regulations it had, no doubt, great administrative utility. But its place is rather in the economics of history than in the history of economics.

The text of the *Livre des Métiers* was published at Paris in 1837 under the title of *Registres des Métiers et Marchandises de la ville de Paris*, 4to, edited by G.-B. Depping, in the series of *Documents inédits sur l'Histoire de France*. The best edition is that of MM. Lespinasse and Bonnardot, forming part of the *Histoire générale de Paris*, of Baron Haussman (pub. 1886).

[See also article *Boyleau*, by Isambert in the *Nouvelle Biographie Générale*, Paris, 1855, vii. 194.] H. H.

BOISGUILLEBERT, *alias* BOISGUILBERT, PIERRE LE PESANT DE, born at Rouen, 1646, died in the same city, 1714. Few details of his life are known. He purchased, in 1690, a judicial office in the city where he was born. An economist and precursor of the PHYSIOCRATS, extremely energetic and persevering by nature, he laid bare, with courage and much practical good sense, the economic defects in the system which prevailed up to 1789. He attacked COLBERT with warmth, and not without reason, for having put agriculture on one side, and shackled the trade of corn. He proposed to Pontchartrain, CHAMILLART, and DESMARETS in succession reforms which are recognised as useful in our days, but he was not listened to, and was even exiled to Auvergne for his publications. His two principal works, *Le Détail de la France* (1695 or 1697), and *Le Factum de la France* (1707), are valuable from the evidence they supply as to the real economic condition of France during the most fatal part, the last thirty years, of the reign of Louis XIV. His complete works, omitting those of a purely literary character, appeared in 1707 (2 vols. in 12mo), under the generic title of *Détail de la France*; in the same year another edition, which appears to have appeared without the author's consent, was published in 2 vols. in 12mo, described as the *Testament politique de M. de Vauban*. Both of these are without the name of the author. These same works, omitting the *Traité du mérite et des lumières des grands financiers*, form part of the Collection Guillaumin (*Economistes financiers du XVIII. Siècle*), with a preface and notes by M. Eug. DAIRE. All these works deserve to be read even in our days. A. C. f.

BOLLES, JOHN A., lawyer (born in Connecticut, 1809; died in Washington, 1878); he wrote *A Treatise on Usury and Usury Laws*, Boston, 1837, pp. 75, to show the mischief of the usury laws which generally prevailed in the United States at that time. The treatise contains a history and discussion of principles; the author expresses the fear that his argument will be regarded with prejudice and ill-will.

D. R. D.

BOLLMAN, JUSTUS ERICK, M.D. (born in Hanover, 1764). He took part in the French Revolution; was imprisoned in Austria, and became noted for his attempt to liberate Lafayette, also in prison in the same country. He afterwards emigrated to the United States, and became implicated in Aaron Burr's conspiracy. He remained in the United States for some years, then went to London, and died in the West Indies in 1821. While in the United States, in 1810, he wrote *Paragraphs on Banks and Banking*, Philadelphia, (pp. 122; 2d ed., 1881). In this he defended the United States Bank as a powerful agent for strengthening the government, cementing the union, and useful in diminishing and augmenting the circulating medium according to public necessities. The pamphlet is typical as illustrating the acrimony of the bank discussion. In 1816 he wrote *Plan of an Improved System of the Money Concerns of the Union*, Philadelphia (pp. 52); in which he again demonstrates the superiority of bank money to treasury notes; also *Strictures on the Theories of Mr. Ricardo*. The history of the greater portion of his life is narrated in *Justus Erick Bollman; Ein Lebensbild aus zwei Welttheilen*, by Friedrich Kapp, Berlin, 1880 (pp. 439).

D. R. D.

BON. A French word signifying a written authority to pay a certain sum of money, or to deliver a certain object or a certain quantity of goods for account of the person signing the authority. This is implied by the use of the words "*Bon pour*"—(*e.g. Bon pour* frs. 1000; *bon pour pain*, etc.) Such authorities, when issued by government officials on the national treasury, are called "*Bons sur le Trésor.*" E. S.

BONÂ FIDE. Literally in good faith; the words are frequently used in connection with a substantive when their proper meaning is "genuine." A "bonâ fide traveller" is a man who is a genuine traveller; a "bonâ fide purchaser" is a genuine purchaser—not a person to whom a gift has been made in the form of a sale. The phrase "bonâ fide holder for value without notice" is used in connection with negotiable instruments. The Bill of Exchange Act has by § 29 substituted the shorter form "holder in due course." E. S.

BONA NOTABILIA. Formerly, if a deceased person at the time of his death left effects of such an amount as to be considered "notable goods" (fixed by the 93d canon of 1603 at £5), within a diocese other than that in which he died, the will was required to be proved or letters of administration taken out before the metropolitan of the province, and not before the ordinary of the diocese. The transfer of jurisdiction over wills to the court of probate by the 20 & 21 Vict. c. 77 has abolished the legal importance of *bona notabilia*.

[*The Law of Executors and Administrators*, by R. L. V. Williams and W. V. V. Williams, p. 292, 8th ed., London, 1879.—*Bona Notabilia*, by G. Lawton, London, 1825.] J. E. C. M.

BONA VACANTIA. The term applied in Roman law to the property of a deceased person which, if not claimed by the legal or equitable heir, went to the state, or in some cases to the municipality, or to the curia, or to the corporation of which the deceased was a member (see Hunter's *Roman Law*, p. 865). In English law the term is sometimes applied to things found without an apparent owner.

[Stephen's *Commentaries*, bk. iv. ch. vii.] J. E. C. M.

BONCERF, Pierre-François, a French publicist, born about 1745 at Chasaulx, was employed by Turgot, and published with his consent, under the assumed name of "Francaleu" a pamphlet: *Les inconvénients des droits féodaux*, 1776. In this he insists upon the freedom of landed property from any feudal impositions, and hopes the king will abolish them. But the author was discovered; the pamphlet was condemned by the parliament to be publicly burnt 23rd February 1776, and Boncerf himself was saved only by the king's intervention from being prosecuted. After the downfall of Turgot, Boncerf retired to Normandy and devoted himself to agricultural pursuits. He was secretary to the Duke of Orleans when the Revolution began; he was appointed a judge in 1790, but his sincerity led to his being brought before the revolutionary tribunal, and he escaped being condemned to death only by one vote. In consequence of these persecutions he died in 1794. In 1789 he had written *De la Nécessité et des Moyens d'occuper avantageusement tous les gros ouvriers*. The first creditors of the nation, he says, are the hands, which demand work and the soil that waits for the labour of the hands (p. 14). Boncerf proposes to give work to the labourers, for "everybody has a right to subsist, but this right supposes a duty—labour" (p. 59).

Boncerf's other writings are enumerated in the *Nouvelle Biographie*, t. vi. p. 554.—see L. de Lavergne, *Les Economistes français du 18e siècle*, 1870, p. 195. S. B.

BOND. Legal term for a deed by which a person (called the "obligor") declares himself bound to another (called the "obligee") to pay a certain sum unless he performs an obligation specified in the same instrument by a clause called "the condition of the bond." Bonds are generally used when security is to be given to a public authority (bail bonds, security to keep the peace, security for costs in actions, etc.), and Contracts of Guarantee are frequently made out in that form, but instruments embodying mercantile contracts do not, as a general rule, assume the form of bonds. The word is also used for certain stock exchange securities, and in that sense is equivalent to "debenture" or "obligation," meaning a promise to repay a sum borrowed by the public authority or company who issues the security (with or without an additional premium), on a fixed date or on a date depending on the operation of a sinking fund (*i.e.* an annual sum to be applied in the purchase of bonds or in the compulsory redemption of some particular bonds, to be determined by ballot), and to pay interest at a certain rate on certain dates up to the time of repayment. Bonds are sometimes secured by a charge on special property (see also Lloyd's Bonds). E. S.

BOND OF CAUTION (Scots law term). See Caution.

BOND OF CORROBORATION (Scots law). Bond given as further security.

BOND AND DISPOSITION IN SECURITY. Scotch equivalent to mortgage.

BOND OF RELIEF (Scots law term). Bond of indemnity given to a surety.

BONDED WAREHOUSES. Warehouses in which articles are lodged under bond for the payment of any revenue duties chargeable thereon.

The payment of duties on taxable commodities at the time of importation or manufacture tends to increase the price paid for them by the consumer over and above that which the importer or manufacturer can afford to take, if the payment be deferred until the commodities are about to be taken into consumption. Interest on the money advanced must be charged, and the quantities on which the duty is paid will usually be in excess of those available for consumption, when allowance has been made for the waste arising from natural causes, and the various operations which the commodities undergo. Inasmuch also as a drawback of duty is ordinarily allowed on exportation, the payment of duty before the ultimate destination of the taxed commodities is known, involves an unnecessary expenditure of time and money in the case of goods intended for a foreign market, or of goods received for transhipment merely. To prevent these disadvantages, and at the same time to safeguard the revenue effectually, Sir R. Walpole, Turgot, and Adam Smith proposed at various times that warehouses should be established, either directly by the state, or

by private enterprise under state sanction, in which taxed commodities might be stored until required for delivery for home consumption, in which case the duty would then be paid, or until the goods were exported and transhipped, in which case they would be delivered free of duty. It was not, however, until 1848, when spirits intended for home consumption were allowed to be warehoused throughout the United Kingdom, that the system can be said to have been established in this country on a basis sufficiently wide to meet the legitimate requirements of trade. Between the years 1848 and 1880 the number of bonded warehouses was permitted to increase at a very rapid rate, and in the latter year it became evident that the cost of the supervising staff was in excess of the expenditure requisite for the benefit of the community as a whole. A committee of inquiry was accordingly appointed by Mr. Gladstone, the result of which has been to effect a considerable economy under this head, whilst the substantial advantages of the system are fully maintained.

In order to prevent the payment of duty on quantities in excess of the actual deliveries for consumption, certain specific allowances from the quantities warehoused are granted in respect of the natural waste arising from leakage or evaporation, and for the loss arising from processes to which the commodities are allowed to be subjected whilst still in warehouse. These comprise the repacking and mixing of tea, the racking, vatting, mixing, and bottling of wines and spirits, the roasting of coffee, and the manufacture of certain descriptions of tobacco, and of certain preparations of that article for farm and horticultural purposes.

The following table shows the quantities of the principal articles imported, in bonded warehouses in the United Kingdom on the 31st December 1912:

Cocoa, Raw	20,308,000 lbs.
Coffee	18,480,000 ,,
Dried Fruits, Currants and Raisins	53,312,000 ,,
Spirits (Foreign)	8,935,000 prf. galls.
Tea	138,492,000 lbs.
Tobacco	213,129,000 ,,
Wine	4,876,000 galls.
Sugar	385,616,000 lbs.

Besides the above, there is always a large quantity of home-made spirits in bond. On the 31st March 1913, 146,825,000 prf. gallons. T. H. E.

BONNET, Victor, born 1814, died 1889. A financial publicist, he became a counsellor of state and a member of the Institute. He wrote in the *Revue des Deux Mondes* from 1860 to 1884, in favour of the monopoly of a bank of circulation, a single standard (gold), indirect taxation, and a reduction of the expenses of the budget. His numerous articles in reviews and similar works have been the basis of the following publications. *Questions économiques et financières à propos des crises*, Paris, 1859, in 8vo.—*La liberté des banques d'émission et le taux de l'intérêt*, Paris, 1864, in 8vo.—*Le crédit et les finances*, Paris, 1865, in 8vo.—*Études d'économie politique et financière*, Paris, 1868, in 8vo.—*Études sur la monnaie*, Paris, 1870, in 8vo.—*Le crédit et les banques d'émission*, Paris, 1875.—*La question des impôts*, Paris, 1879.

A. C. f.

BONORUM POSSESSIO. The Roman law of inheritance, as derived from the xii. tables, was full of hardships and technicalities, and frequently caused inheritances to be forfeited to the state. To mitigate these evils the prætors introduced the "*bonorum possessio*," which conferred on the persons designated by them all the practical advantages of heirship, though they were not heirs in the strict sense. As, after the lapse of a year, the *bonorum possessor* acquired an indefeasible title, and in the meantime was protected by the equitable jurisdiction of the prætors, the difference was not important. The practical result of this procedure was that the formalities of testaments were relaxed, the law of intestate succession was made more humane and just, and various other reforms were introduced. The prætorian system of intestate succession was in its main principles embodied in the rules laid down by Justinian, which, with slight modifications, have been introduced in most European countries. E. S.

BONUS. A bonus on shares is sometimes paid to proprietors as supplementary to the regular dividend, and is generally derived from undivided profits of former years, or from profits derived from exceptional transactions. It is often a difficult question to decide whether a bonus on shares belongs to a person having a life-interest, or whether it ought to be paid to the person ultimately entitled to the shares. Elaborate rules on this subject are laid down by the House of Lords. Bouch *v.* Sproule, *Law Reports*, 12 Appeal Cases, 385. The word bonus is also used by insurance companies to denote the additions made to the amounts of life policies at stated periods from accumulated profits reserved for the policy-holders.

A. E.

BOOK ACCOUNT CREDIT. As nearly all the large transactions of business in most civilised countries, and an increasing proportion of the smaller ones, are now settled through payment by cheque, the circulation consists to a great extent of entries in the books of bankers and traders, and the importance of these transactions is proportionally great. Credit is usually afforded through book-entry, the privilege of employing the capital of others being thus given in the manner most convenient to those who require the use of it.

BOOK-KEEPING, or the art of keeping accounts, has for its object a systematic record of transactions in money or in money's worth, designed to show the financial position of individuals (included in this term "individuals"

are all mercantile and other associations), both as regards themselves, and also in relation to others.

This object is carried into practice in all thorough systems of book-keeping on the lines of an unvarying principle called book-keeping by double entry, and which may be described as follows: There are two aspects in every transaction, as regards the person recording, which must be taken account of—its *origin* and *destination*; in some cases the terms cause and effect would be more applicable. This "taking account of" involves keeping an account in these two aspects. Now an account may be affected in two ways, there is the *debit* side and the *credit* side; a transaction may be chargeable against an account, *i.e.* be placed on the *debit* side, or it may be to the credit of an account, *i.e.* be placed on the *credit* side; for example, money received must be placed to the credit of an account in respect of its origin—the source from which it comes; and it must also be placed to the debit of an account in respect of its destination—the till, the cash-box, the bank, as the case may be, of the receiver. It will be seen that these two accounts are affected by this transaction in opposite directions. This rule invariably holds in every transaction. If in the one aspect it has to be placed to the credit of an account, in the other aspect it will have to be placed to the debit, and *vice versa*. Thus, in the record of any number of transactions the sum of the aggregate of the entries to the debit of the various accounts will equal the sum of the aggregate of the entries to the credit of the various accounts; and again, if only the balance between the debit and credit entries on each account be dealt with, the sum of the balances to the debit will equal the sum of the balances to the credit; but, as these balances are the combined outcome of the cause and effect of each and every transaction, they will represent the net result of the whole of the transactions recorded, and may be arranged so as to show not only the altered financial position brought about by these transactions, but also the various causes by means of which this result was obtained.

The methods used to carry out this principle vary with the nature and circumstances of the transactions, with questions of convenience, of detail, and with many other considerations.

The primary record of transactions is made in a book called the *Day Book* or journal.

The accounts of those transactions which are derived from this record are kept in a book called the *Ledger*.

A simple record of transactions as they occur seriatim would give a *Day Book* in its crude form. Applying method to such a record, the entries at once fall into natural groups; those relating to money received or paid may form a Day Book by themselves; such a Day Book is called the Cash Book. Those relating to sales of goods may form a Sold or Sales Day Book; and again, records of purchases may form a Bought or Purchases Day Book, others, a Bill Book, and so on, with any variety of subdivisions desirable, but all springing from, and forming part of, the original *Day Book*.

In the same manner, the *Ledger* may be subdivided to suit convenience, such subdivisions being called by explanatory names, such as Sold Ledger, Bought Ledger, Loan Ledger, Private Ledger, etc.

Thus it will be seen that the *Day Book*, with its subdivisions, contains the materials from which the edifice, the *Ledger*, is built up.

The best systems of book-keeping are based on the application of the principle of double entry. Book-keeping by single entry would be better described as incomplete double entry; there is no practical system to which the term of single entry could be rightly applied. If a person takes stock of his assets and liabilities, and compares it with the stock taken at some previous date, he arrives at what may be termed a single entry balance sheet. He has before him the result at two different dates, and, by inference, can argue that, as his property has increased or decreased, such an alteration must have been caused by his having made so much profit or loss; but should he have made an error in taking stock of his property, such inference would be in error also; whereas by double entry, the steps by which such increase or decrease in his property was arrived at would be shown, and the result would be open to demonstration and proof.

Skill in book-keeping consists, not in forcing the record of transaction through any particular system, but in devising and selecting the methods best adapted to the general nature of the transactions to be recorded.

The omission of the keeping of proper business account books is regarded as misconduct under the bankruptcy law of this country (see BANKRUPTCY LAW). It is also punishable under the French commercial code. Though good book-keeping will not save an unsound business from ruin, it may be regarded as one of the principal corner stones in the edifice of commercial prosperity (see BALANCE SHEET).

[Among many books on this subject may be mentioned, *Book-keeping*, Hamilton & Ball, 1882. —*Double Entry Elucidated*, B. F. Foster, 1881.]

J. P.

A new method of book-keeping now used in Italy, whence many improvements in this art have already proceeded, is *Logismography* (from λογισμός and γράφειν) a system of keeping accounts, based on double entry, for which it is claimed that it is capable of a far more general application than any other as yet known, and can be applied equally to the domestic and commercial affairs of private individuals, to

the business of commercial and industrial societies, or to the budget and the accounts of the state. Logismography, invented by Giuseppe Cerboni, director of the department for government accounts in Italy, is taught in all the technical schools of the kingdom and in the three superior schools of commerce in Venice, Genoa, and Bari. It is applied in all the central departments of the state; besides a number of local departments (*e.g.* the provincial administration of Parma and the municipality of Reggio-Emilia) and of private societies (*e.g.* the popular bank of Parma and the "Omnibus" company of Florence). Logismography claims to be superior to any other method in the exactness and celerity of registration of the transactions recorded, and shows nearly *automatically* any error which may have taken place. It consists of four instruments called—

The Day-Book.	The Table of Accounts.
The Developments.	The First Draught.

The day-book is an account book kept on two pages: on the first are three columns, of which the first serves for the progressive *number* every transaction receives, the second one for the *description* of every transaction, the third one for the amount of every transaction in double entry; on the second (opposite) page there are two accounts in simple columns, as in the day-ledger book in the American system (see Fig. I.) The first of these accounts has the heading, *Owner of the business*, and has the cypher A; the second one has the heading, *Consignees and Correspondents*, and has the cypher B. At the end of these two accounts (to the right) is situated a column headed *Compensations and Permutations*.

The two accounts A and B must always balance each other, because the debit and credit of the one must always be equal for every single transaction, and their total sum must be equal to the debit and credit of the other one. On the credit side of A are inserted the sums representing the capital of the owner, and every increment it receives (gains, profits): on the debit side of B are registered the diminutions of the capital (losses, expenses, consumption). Sums indicating transactions giving no loss or gain,—buying or selling for ready money, exchanges, paying of bills of exchange,—are inscribed in the last column headed compensations and permutations, and are then transferred to the book described as developments (of B). The accounts of the day-book show at every moment the net capital of the owner; for this purpose the amounts have only to be totalled, and the debit subtracted from the credit in each account.

The second instrument, called *Developments*, consists of columns for the division and classification of the sums registered in the day-book. The first *Development* has the cypher A, and is called *Account of the Owner*. It consists (1) of a column for the progressive number of every transaction; (2) of two columns called *Equivalence Columns*, because they are the reproduction of the account A of the day-book and contain the same sums it contains; (3) of a column called *Permutations*, and, lastly, of a number of accounts—generally ten or twelve—in simple columns, which *analyse* the account A (see Fig. II.) The sums inscribed in the credit column of the account of equivalences A must be retranscribed in *one*, or *in several* columns —after due subdivision—of the *Analytical Accounts*, viz. the series of accounts in simple columns following (to the right) upon the equivalence columns. The sums registered in the column of *Permutations* must be registered on *both* the credit and the debit side of the *Analytical Accounts*.

The second *Development* has the cypher B, and is called, "Account of the Consignees and Correspondents," and is disposed of in the same manner as the former development (see Fig. III.)

These developments (first and second) are called developments of *first degree*. Developments can be added of second, third, etc., degree. For example, in the B development (Fig. III.) there are the accounts for cash, for storehouse or magazine, for debtors, etc., which can be sub-developed. Supposing the account "storehouse" to be sub-developed, it would have the cypher B1, which would be repeated on a sub-development for storehouse, and might contain, say, the accounts cloth, cotton, silk; and if "cloth" were to be subdivided again, it would have the cypher B1a, and so on.

The completion of all the developments is the ledger.

The account which is sub-developed must always be repeated at the beginning of the sub-development, so that all the accounts are closely connected with each other. The ledger can be divided in two volumes: Developments A and Developments B.

The *Table of Accounts* is a statement which contains the index of all the accounts, disposed in such a fashion as to show how they are placed in the accounts of the single developments, and how a development of a certain degree depends on the development of superior degree (see Fig. IV.) The *Table* is the instrument by which an account is opened and headed, and the first draught is shaped, and shows the ramification of all the transactions. A *First Draught* is a paper on which a transaction is described with an indication of the developments, and the columns in which it has to be received.

Every transaction has its first draught (see Fig. V.)

Logismography renders a minute *division of labour* possible in the formation of first draughts, or in the registration in the day-book, and in

the different volumes of developments. Every registration runs in a horizontal line. By the first draught the capital is registered in the day-book, and credit or debit modifications in the developments.

The ascertaining the correctness of accounts is simple and rapid; the sums must be added in all the accounts, and the balance is registered in the usual way. In every development, therefore, the addition of all the debit balances and all the credit balances must be made, and the smaller of these sums is written down in the column of compensations, whilst the difference is registered in the first account (of equivalences) of the development. To close the accounts one must begin by the developments of highest degree and go back to those of first degree, and last to the day-book. The day-book for the accounts of the State is more complicated, and has more accounts in it than the one described; but the form of the developments and their arrangement is the same. In accounts concerning the finances of the State, logismography receives an extension, and has an importance which can only be estimated by financiers, and could not be explained in so brief a description as this must necessarily be.

Fig. III.—*Developments B. Accounts of Consignees and Correspondents.*

Draughts.	B.		Permutat. and Compens.	Cashier.		Storehouse.		Debtors.		Creditors.	
	Debit.	Credit.		Debit.	Credit.	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.
1	2	3	4	5	6	7	8	9	10	11	12
1	10	..	30	15	..	..	..	25	..	..	30
2	..	..	50	..	10	50	..	..	..	..	40
3	8	..	..	..	..	8	..	..	..	..	..
4	..	4	..	..	..	..	4	..	..	..	..
	18	4	..	15	10	58	4	25	..	..	70
5	..	14	70	..	5	..	54	..	25	70	..
	18	18	150	15	15	58	58	25	25	70	70

Fig. IV.—*Table of Accounts.*

Day Book.	First Draughts Column	1	
	Transactions	2	
	Amounts	3	
	Owner debit	4	A
	Owner credit	5	A
	Consignees debit	6	B
	Consignees credit	7	B
	Permutations	8	
Developments. A.	First Draughts Column	1	
	Equivalence Account debit	2	
	Equivalence Account credit	3	
	Permutations	4	
	Capital debit	5	
	Capital credit	6	
	Profits debit	7	
	Profits credit	8	
	Losses debit	9	
	Losses credit	10	

Logismography: Type or Form of Registrations, with an Example.

Fig. I.—*Logismographic Day-Book.*

Draughts.	Transactions.	Amount.	Owner. A.		Consignees and Correspondents. B.		Permutations and Compensations.
			Debit.	Credit.	Debit.	Credit.	
1	2	3	4	5	6	7	8
1	Capital .	40	..	10	10	..	30 B
2	Purchase	50	..	..	..	..	50 B
3	Profits .	8	..	8	8	..	..
4	Losses .	4	4	..	..	4	..
			4	18	18	4	80
5	Saldo .	92	14	..	..	14	18
		194	18	18	18	18	158

Fig. II.—*Developments A. Accounts of Owner.*

Draughts.	A.		Permutat. and Compens.	Capital.		Profits.		Losses.			
	Debit.	Credit.		Debit.	Credit.	Debit.	Credit.	Debit.	Credit.		
1	2	3	4	5	6	7	8	9	10	11	12
1	..	10	..	..	10	..	..	..	..		
3	..	8	..	..	..	..	8	..	..		
4	4	..	..	..	..	..	..	4	..		
	4	18	..	..	10	..	8	4	..		
5	14	..	8	14	4	8	..	..	4		
	18	18	8	14	14	8	8	4	4		

Fig. V.—*First Draught No. 2.*

Bought merchandise for £50, of which 10 paid and 40 still owed.			
Day Book.	Column 3	£	50
	„ 8	„	50
Developments. B.	Column 4	£	50
	„ 6	„	10
	„ 7	„	50
	„ 12	„	40

[*Bankers' Magazine* June 1890.—For description of method, No xvi. of the *Manuali Hoepli - Logismografia, Teorica ed Applicazioni*, by Celestino Chiesa, Ulrico Hoepli, Milan. For large works, *Trattato di Ragionieria*, by Gitti e Massa, Milan, *Trattato di Contabilità*, by Marchesini.] G R.

BOOK OF RATES. Up to 1558 Poundage was levied on the value

of the goods as sworn by the merchant. But in the year mentioned a book of rates was published that specified the values at which goods of different sorts were to be valued for custom duties. A new "book" was issued by Queen Elizabeth, 1586, in which the various commodities were stated in alphabetical order, with their values, and valued according to the real price. James I., after the decision in BATES'S CASE, issued a "book of rates" with the object not merely of rectifying values, but of increasing the impost. A new book was subsequently issued by Charles I. with the object "of better balancing of trade in relation to the impositions in foreign parts upon the native commodities of the kingdom." J. E. C. M.

[See Dowell's *History of Taxation and Taxes in England*, 1889, vol. i.]

BOOM. A slang word, which originated in the United States, where it is used to describe a rise of prices in any speculative market, accompanied by excitement often running to excess. A. E.

BOOTY. Moveables taken from the enemy on the field of battle or in storming a town. All booty belongs to the state in whose name and by whose authority it is made, the title becoming complete twenty-four hours after capture. Modern states have adopted regulations by which the whole or part of captured goods or their proceeds are distributed amongst those concerned in the capture. By the 3 & 4 Vict. c. 65, § 22, the sovereign may refer questions of booty to the judge of the prize court, now the court of admiralty. In the United States the president has, in the absence of any directions given by Congress, discretionary power. [*International Law*, by W. E. Hall, Oxford, 1889.] J. E. C. M.

BORNITZ, JACOB, was born (late in 16th century) at Torgau in Saxony, and lived afterwards at Schweidnitz in Silesia as imperial councillor. He appears to have possessed considerable influence with the Emperors Rudolf II. (1576-1612) and Matthias (1612-1619). He suffered much in the Thirty Years' War from the violence of the soldiery, who robbed him of his library. His economic writings are—(1) *De nummis in republica percutiendis et conservandis*, 1608; (2) *Aerarium, seu Tractatus politicus de aerario sacro, civili, militari, communi et sacratiori . . . conficiendo*, 1612; (3) *Tractatus politicus de rerum sufficientia in republica et civitate procuranda*, 1625. In the last of these he professes to give the results of observation and intercourse with artificers in his journeys through Holland, England, France, Italy, and Germany, treating his materials, however, not from the technical, but from the economic point of view. He was the first who did for Germany what MONTCHRÉTIEN de Watteville had done a few years earlier (1615) for France, namely, attempted to set forth with systematic completeness the economic knowledge of his time, which he illustrated with much learning, though of a somewhat pedantic and uncritical kind, and with many facts derived from his own experience. He takes, says ROSCHER, in his half-barbarous period, a similar position to that of RAU in the later German economics. On the theory of money he has much that is sound and instructive; he strongly opposes any debasement of the currency. In the spirit of the MERCANTILE SYSTEM he favours extensive and even minute interference with private industry. He would prohibit the exportation of money, and would prevent, by means of SUMPTUARY LAWS, the introduction of costly foreign wares, whilst he would encourage the importation of raw materials (Roscher, *Gesch. der Nat. Oek. in Deutschland*, p. 184). J. K. I.

BOROUGH. Originally a fortified place, now (1) a town having municipal institutions (see CORPORATION, MUNICIPAL), (2) a town sending representatives to parliament. As a general rule a municipal borough is at the same time also a parliamentary borough, but the area of the one does not always coincide with the area of the other. E. S.

BOROUGH ENGLISH. A local custom prevailing in some boroughs according to which lands within the borough descend to the youngest son. E. S.

BOSANQUET, CHARLES, governor of the South Sea Company and an eminent London merchant, was born in 1769 and died in 1850. He was the author of the following publications: (1) A *Letter on the proposition submitted to Government for taking the duty on muscovado sugar ad valorem*," probably written in 1806. (2) A *Letter to W. Manning, Esq., M.P., on the depreciation of West Indian property*, probably written in 1807. It considers more especially the trade in sugar and rum, as affected by the Navigation Act and other of our commercial regulations. (3) *Thoughts on the value to Great Britain of Commerce in general, and of the Colonial Trade in particular* (1807). This pamphlet was answered by William SPENCE in his *Radical cause of the present distress of the West India planters pointed out* (1807). (4) *Practical Observations on the Report of the Bullion Committee* (1810).

The last is by far the most important of Bosanquet's writings. The author uses the term "practical" because (he tells us) it is his belief that RICARDO'S pamphlet (on *The High Price of Gold Bullion*), which had led the way in the bullion controversy, was "wholly theoretical"; and the report of the bullion committee itself was expressly brought under the same condemnation (see CANNING). Bosanquet contends that the bullion committee had laid two distinct and opposing views before parliament, the one "theoretical" and embodied in

their own report, the other "practical" and embodied in the evidence of the "practical" witnesses as given in the appendix to their report. Proceeding to details, he sums up the committee's views in the following six propositions: (1) The variations in exchange cannot for any length of time exceed the cost of transporting and insuring the precious metals; (2) the market price of gold bullion can never exceed the mint price unless the currency is depreciated below the value of gold; (3) so far as the custom-house returns of exports and imports go, the state of the exchanges ought at this time (1810) to be favourable and not unfavourable; (4) the bank, during the restriction, possesses the exclusive power of limiting the circulation of notes; (5) the circulation of country bank notes depends on the issues of the Bank of England; and (6) the paper currency of England is now (1810) depreciated in comparison with gold, and the high price of bullion and low rate of exchange are at once consequence and sign of the depreciation.

All these propositions are disputed by Bosanquet. He adduces, against the first, the state of the exchanges and the cost of transmission of specie in 1797, also between 1764 and 1768, 1775 and 1777, 1781 and 1783, and in 1804 and 1805. He considers that the facts show that there is no "natural limit" of any kind to the variations of exchange, and points to the Swedish exchanges which were then favourable, and to the premium on English paper which then prevailed in the United States of America. He attacks the other five propositions in a similar manner, though, in giving his views of the relation of the bank to the paper currency, he is fain to use "theoretical" reasonings from first principles, and even to appeal to the authority of Adam Smith (*Wealth of Nations*, II. ii. 145, 1; M'Culloch's ed.) The "obvious and practical causes" of high prices are (he says) the recent vicissitudes of the corn trade and the increase in our taxation; to reach any other, the bullion committee have had to adopt wrong principles and then mis-state their facts. In "Supplementary Observations" annexed to the 2d ed. of his pamphlet, Bosanquet gives the committee some riddles to explain by their theory if they can, *e.g.* the fact that the exchanges, after being 6 per cent in our favour from 1790 to 1795, fell to 3 per cent below par in the next two years, though there had been no change in the bank's circulation and no suspension of cash payments. Ricardo deals with these *cruces* and with the rest of Bosanquet's case in his own *Reply to Mr. Bosanquet's Observations*, with appendix, 1811. Bosanquet has an idea that the standard value of a pound note is the interest of £33 : 6 : 8 three per cent stock. This is an illustration of the danger experienced by those who, being conversant with details, believe that they thereby understand principles.

[M'Culloch's *Literature of Political Economy*, 1845, p. 174.—*Gentleman's Magazine*, 1850, new series, xxxiv. 325.—*Dictionary of National Biography*, art. "Bosanquet (Chas.)."—See Bullion Committee; Horner; Huskisson; Ricardo.]

J. B.

BOSELLINI, Carlo (born at Modena, 1765, died 1823), published in 1813 in Modena a treatise on political economy in two volumes. Although the title of the book is *New Examination of the Sources of Private and Public Wealth*, it contains nothing which was new for its times, and does not seem to have had any particular success.

M. P.

BOSTON PORT BILL. Among the events leading to the revolt of the American colonies none is more famous than the attack upon the tea ships in Boston harbour (16th December 1773). This caused great indignation in England, where the parliament resolved to resort to coercive measures. A bill was introduced and carried in 1774 by which, after 1st June, the port of Boston was to be closed to all trade. No vessels might be loaded or unloaded in the harbour, and English men-of-war were sent to enforce the act, which was to remain in force until the East India Company had been compensated for the destroyed tea and until the king in council was satisfied that peace and order was restored in Boston. This measure was bitterly resented in America, where the assembly of Virginia decreed that 1st June should be observed as a day of fasting and humiliation. The general sympathy with Boston was one of the prominent causes of the Congress at Philadelphia (September 1774), which marks the beginning of combined resistance to England.

[Mahon, *History of England*, vol. vi.—Lecky, *History of England*, vol. iii.]

R. L.

BOTERO, Giovanni, born 1540 at Bene in Piedmont, died 1617 at Turin. A powerful thinker, he opposed energetically the mercantilist theories, and enunciated the law of increase of population later known as Malthus's law. He occupied some of the highest official positions in his country.

His work, *Della ragione di Stato*, published for the first time in Venice in 1589, again there in 1619, and in Turin in 1596, has been translated into all the principal modern languages, and also into Latin. It was translated twice into French, once in 1599 by Choppins, *Raison et Gouvernement d'État*, and once in 1606 by Pierre de Deymier, *Maximes d'État militaires et politiques*. Not less remarkable is his book on the causes of the greatness of cities, *Delle cause della grandezza delle città*, published 1598 in Rome. Botero was an opponent of Macchiavelli. Having travelled a great deal, he published his so-called *Universal Reports*, a treatise on "The Strength of all the Powers of Europe and Asia," Rome, 1592 and 1595.

M. P.

BOTTOMRY, Loan on. A contract in writing in which the borrower recites the in-

tended voyage by a ship therein described, and the receipt of a loan upon condition that if the ship escape disasters at sea, or from enemies, or pirates, the lender is to receive back his advance with a stated sum for interest on completion of the voyage, but that the borrower is to be released from his obligation if the ship be lost or fall into the hands of enemies or pirates. The form of contract used is of time-honoured antiquity. It still closely resembles in its outlines those of a specimen extant in the speeches of Demosthenes. Traces of the loan on bottomry are also found in some of the most ancient codes of eastern nations. It finds a large place in the early sea laws and ordinances of the commercial nations and communities of Europe as well as in their legal literature. Down to very recent times it was the sole method by which the master of a vessel damaged by storms, or other hazards at sea, in some distant port removed from the ordinary channels of commerce and from any possible speedy means of communication with the owner of the vessel, could raise funds for the necessary repairs of his ship and the resumption of her voyage. All this, however, has been much changed of late years. The most distant corners of the globe have been knit as it were into one country by the economical revolution which science, and particularly telegraphy, have brought about, now enabling funds to be laid down almost immediately from and to the most widely separated places through the electric wire. This is fast rendering the loan on bottomry bill or bond obsolete in practice. The bottomry loan differed only from the ordinary loan on nautical interest of the Greeks and Romans in its good faith, as it required a pecuniary insurable interest to exist as the foundation of the contract, which the Fœnus Nauticum did not, the latter being resorted to as a gambling or speculative wager by persons frequently not interested in the ship whose loss or safety was betted upon, a description of amateur underwriting by means of which the elder Cato and other wealthy Romans increased their fortunes. The loan on bottomry would seem to have furnished the ancient merchant and shipowner with an effectual form of marine insurance. In reality it supplied to the borrower not only a trading capital but also what was tantamount to a marine policy of insurance, with this peculiarity about it that he needed to be under no doubt about the solidity of the Underwriter, as in this form of contract the policy money was already in the borrower's hands at the very inception of the transaction, and applicable to make good any losses from the perils of the sea in the event of a fair claim arising therefrom. On the other hand, to the lender and underwriter such contracts, so long as the special interest or premium was fixed at a high enough rate, afforded a profitable investment of funds on average, as there has always existed a well-defined mercantile usage respecting such loans, generally including proper control by public registry, power to appoint a supercargo, and strict enforcement of other regulations in his favour. Neither did the pecuniary terms of such contracts present an obstacle to their habitual use. The net premium for sea-risk payable by the borrower, the shipowner, or merchant, was conditional on the vessel coming safely to port. It was only the difference between the extra rate allowed as nautical interest and the ordinary rate of interest on loan. The more modern system of marine insurance, in which the premium paid is merely the *pretium periculi* without being mixed up with a loan as in the case of the bottomry bill or bond contract, could scarcely in ancient days have been so conveniently circumstanced, as in the event of the disaster at sea, the underwriter might or might not be found equal to bear the burden of his bond. And the resources of ancient commerce were even equal to those instances in which the taking up of funds in this form was resorted to by those who had capital enough of their own. For these funds might be, and doubtless were, used for the relief of the borrower, who, when he did not require the whole advance for the ship's immediate purposes, could reinvest the balance in a temporary way with an *argentarius*, or banker, who allowed interest on its deposit at the common rate, and thus diminished the merchant's or shipowner's outlay to the bare differential rate of interest between what he borrowed and what he lent at. The balance thus resulting would be neither more nor less than the net premium of marine insurance, the whole system of which was inaugurated many centuries subsequently by a kind of commercial evolution (see Insurance, Marine). F. H.

BOULAINVILLIERS, Henri de, a French writer, was born at Saint-Saire in Normandy in 1658, served some time in the army, but retired soon to his country seat, where he died in 1722. He was an admirer of Feudalism, and would have liked to restore "feudal liberty," the decay of which seemed to him the cause of the miseries of the people ; but his chief merit lay in the frankness with which he laid bare the causes of the financial distress of France. His works on finance were not published till after his death. They were prohibited in France.

Boulainvilliers's works are as follows : *État de la France*, published in 1727-28, 3 vols. fol. This contains historical and descriptive accounts of all the provinces of France, extracts from the memoirs of the Intendants, and his own financial projects. The latter have been published separately under the title of *Mémoires présentés à Monseigneur le Duc D'Orléans, contenant les moyens de rendre ce Royaume très-puissant, et d'augmenter considérablement les revenus du Roy et du Peuple*. Par le Comte de Boulainvilliers,

2 vols. À La Haye et à Amsterdam, 1727. Among these the second memoir, directed against the "financiers" and proposing a state-treasurer's office, the third against arbitrary taxation, the fifth against the excessive salt-tax, the sixth against disorderly financial administration in general, are still of especial interest. His economic ideas (see pp. 215-225, vol. ii. of the last named work) are on the level of the ordinary mercantilism of the day.

[*Nouvelle Biographie*, t. vi. p. 937; Montesquieu, *Esprit des Lois*, liv. xxx. ch. xi., Alphonse Calléry, *Les réformateurs de l'ancienne France, Boulainvilliers*, 1883. Charles Smith ascribes to him *Les intérêts de la France mal entendus*, 1756. But this work is written by Ange de Goudar (see *Three Tracts on the Corn Laws*, 1766, p. 161), Levasseur, *La Population Française*, 1889, p. 202, and Dr. Stephen Bauer in an article, "Zur Entstehung der Physiokratie," *Conrad's Jahrbücher für Nationalökonomie und Statistik*, N.F. bd. xxi. p. 151]. S. B.

BOUNTIES. A bounty is, in principle, something received by producers in addition to the price received from consumers through the ordinary operation of the market. In political economy the term is usually confined to such additions as are given by governments. We may distinguish (1) intentional bounties, designed to encourage export or to stimulate production; (2) unintentional bounties, begun unconsciously but afterwards recognised to be such, *e.g.* the sugar bounties of to-day; (3) virtual or disguised bounties, neither intended nor recognised, but actually operating as such; *e.g.* Great Britain's subsidies to the continental powers in the 18th century, which really stimulated her exports at her own expense, but were not designed to do so; endowments which enable learning and teaching to be obtained at less than actual cost price, prizes for inventions, and premiums of many kinds.

Adam Smith criticises them severely, and, after his usual manner, adduces detailed instances of their failure. Ricardo joins in the condemnation, but on somewhat different theoretical grounds; and he goes on to point out that Adam Smith failed to go far enough through confining himself to the case of supply not being affected in amount. The effect upon supply is, however, most important, and Ricardo shows that the increased supply necessitates, in the case of corn, recourse to less advantageous employment of capital, and so to increased prices and to a rise in the rent of land. Since the change in British industry from agricultural to manufacturing, it is necessary to dwell upon the working in manufactures of diminution of cost as amount of supply increases, and an important school of protectionists follow List, in recommending bounties as stimulants to this class of production only (List, *National Political Economy*, trans. S. S. Lloyd, London, 1885). Ricardo condemns bounties as the worst kind of taxation, because they not only raise a tax but divert capital perniciously. Against this have to be set the considerations that a bounty is not lost to the nation which pays it; and it is often advocated in cases where there is an amount of capital or labour, or both, which cannot find employment otherwise. All petitions for bounties on the part of trades contain the assumption that capital and labour will be rendered inoperative unless assisted.

Many free-traders find justifications for bounties in order to obtain other objects than strictly economic ones, *e.g.* J. B. Say, who inculcates free principles as the rule, justifies Louis XIV.'s bounties on shipping, their purpose being to raise a body of sailors, and the English bounties on refined sugar. He also declines to follow Adam Smith in his general rejection, so long as custom and legal restrictions interfere with the free investment of capital, and so long as artisans require training; and specifically commends "les sages encouragements" of Colbert as having issued in the French silk industry. Sismondi allows them for "sûreté" or "santé," and Roscher agrees that they may be useful in a transitional stage. J. S. Mill's remark (bk. v. ch. x.) that the bribing of customers is going beyond what any shopkeeper ever did, is neither accurate, as it is often done, nor profound, as a nation is shopkeeper, farmer, and manufacturer in one.

One advantage claimed specifically for bounties is that the amount drawn from the national purse is known, and it can be definitely accepted as a definite subsidy, as one of the expenses of national life for an end deemed desirable. Against this it is urged that the amount so raised does not measure the change caused. In the complications of modern industry there are no isolated changes; production and trade are disturbed, and it is because of the complication of effects that economic theory is not able to establish convincingly the limits of the effects produced. Again, the manifest simplicity of aiding industry by a dip into the national purse must be regarded as a disadvantage. The facility is a fatal one, until governments are found both honest enough and wise enough to resist the solicitations of particular industries A special advantage is claimed for bounties on production, that there is nothing invidious in them as against foreign nations: they are free from the charges to which bounties on export and prohibitory duties are liable, in that they are purely domestic in intention; and, however justly a foreign nation may resent having our exports thrust upon it or its own produce kept off, it can hardly protest against our taking what measures we please to develop our power of supplying ourselves.

Recent history shows many examples in which the whole subject of bounties may be effectively studied. Adam Smith's caustic account of the *herring fishery bounties* (bk. iv. ch. v.) is

well followed up by M'Culloch (*Dict. of Commerce*), and their nugatory character appears to be demonstrated. The *linen bounty* affords another good example; Chambers of Commerce pleaded in vain for its continuance, and the event showed that on its suspension in 1834 export paused for a little while, but resumed its former volume in three years, and went on steadily increasing until 1848, after which it rushed forward under the impetus of the new industrial policy (see *Linen Trade, Ancient and Modern*, London, 1864, pp. 663-670). The *corn bounties* are thoroughly discussed by the English economists; their interest might again become actual if any foreign nations or colonies should choose to stimulate their corn exports; and a virtual bounty is claimed to be in operation in favour of the Indian producer through the fall in the value of silver in gold-using countries. An instance of a temporary bounty effecting its purpose in a way difficult to deprecate is found in a bounty on the export of engravings given soon after the founding of the Royal Academy (1769); of which it is said that it called a number of talents into action, *e.g.* Woollett, and attracted to London a crowd of foreigners, Cipriani, Kaufmann, Pastel, Moser, and Bartolozzi, and secured for English engraving a permanent place among the arts. (Cassell's *History of Engraving*, London, p. 236). Bounties on *shipbuilding and shipowning* have been in high favour with maritime countries for reasons of state. France at this time gives 1½ francs a ton for every thousand miles run by ships both built and owned in France, and half that premium for ships owned at home but built outside (see Fawcett, *Free Trade and Protection*, ch. ii.) The *bounties on sugar* have a complicated history—begun without this intention, their result has been to revolutionise the production of sugar by giving beetroot an advantage against cane which has issued in the former being now the larger source of supply (see Bounties on Sugar). The bounty-giving countries expressed themselves unanimously in favour of abolition at the recent conference, provided that united action can be secured. Resistance is made by some English free-traders who regard the cheapness in England as the primary advantage; and an obstacle is interposed by the refusal of the United States to enter into any undertaking not to begin a bounty system. The foreign office (see statement by under-secretary in parliament) knows of only the following "considerable" bounties in operation in 1889: on shipping, on sugar, and on the Newfoundland fisheries (French).

The employment of a bounty by the state may be justified as a measure of equity when industries are affected by the action of state. When, for example, a treaty of commerce or a general change of state policy alters suddenly the industrial situation, there may be some claim on the part of the owners of fixed capital and the persons in whom there is fixed skill, for some supplement to the lowered market-price which will allow their industry to diminish or die away gradually. But bounties are artificial interferences with production, in the same sense that protective duties are, from an opposite point of view. A bounty has been happily called a negative tax (see Bounties, Abstract Theory of).

The question is discussed more or less in all the standard works on political economy, and the history of various bounties is given in the commercial histories and parliamentary papers relating to the different trades. A. C.

BOUNTIES, Abstract theory of. The theoretical inquiry whether a country can possibly benefit itself by a bounty, may be subdivided according as the arrangement considered is only temporary or more enduring. (1) The arguments, by which Mill, in a well-known passage (*Pol. Econ.*, bk. v. ch. x. § 1), defends temporary protection of nascent industries seem applicable, *mutatis mutandis*, to bounties as well as to duties. The same may be said of the considerations in favour of temporary protection, adduced by Dr. Sidgwick in his *Political Economy* (bk. iii. ch. v. § 1), and his *Method and Scope of Political Economy* (pp. 1-20). (2) The arguments on the side of a less transitory bounty are more abstract. Cournot argues that a bounty to a monopolist might possibly cause greater gain to consumers than loss to the treasury (*Recherches . . . 1838*; ch. vi.) In this reasoning Cournot takes no account of those consumers, who are induced by the fall of price to increase their purchases. But of course, when this circumstance is taken into account, the argument in favour of a bounty becomes *a fortiori*. The omission, however, seems fatal to the arguments, which, in the case of free competition, Cournot has urged in favour of protecting duties and bounties (*Ibid.*, chs. x.-xii. and see M. Bertrand's criticisms in the *Journal des Savans* for 1883). Some presumption is perhaps derivable from Cournot's principle that a "bounty is in algebraic language a negative tax, so that the same formulæ should apply to a tax and bounty"; taken in connection with the proposition admitted by many economists that it is possible for a country to benefit itself at the expense of foreigners, by a duty on imports or exports, in certain cases. Such a case is stated by Mill (*Pol. Econ.*, bk. v. ch. iv. § 6, beginning), and more simply by Dr. Sidgwick in the following passage: "Suppose that a 5 per cent duty is imposed on foreign silks, and that in consequence, after a certain interval, half the silks consumed are the product of native industry, and that the price of the whole has risen 2½ per cent. It is obvious that, under these circumstances, the other half which comes from abroad yields the state 5 per cent, while the tax levied from the con-

sumers on the whole is only 2½ per cent; so that the nation in the aggregate is at this time losing nothing by protection, except the cost of collecting the tax, while a loss equivalent to the whole tax falls on the foreign producers" (*Pol. Econ.*, bk. iii. ch. v. § 2, and context). It seems possible to imagine a converse case, in which a bounty would not be detrimental to "the nation in the aggregate." Professor Marshall argues (*Principles of Economics*, bk. v. ch. vii.) "that it might even be for the advantage of the community that the government should levy taxes on commodities which obey the law of diminishing return, and spend part of the proceeds on bounties to commodities which obey the law of increasing return."

Such speculative considerations are not inconsistent with a firm adherence to the practical principle of free trade. Thus Dr. Sidgwick, while he regards it as "erroneous to maintain, on the ordinary economic grounds, that temporary protection must always be detrimental to the protecting country," does not therefore accept the practical conclusion which that remark seems to favour. A decisive consideration against it is that no government is wise enough to discern in what cases protection would not be detrimental, or strong enough to confine itself to those cases (*Method and Scope*, p. 19). It may be added that refined arguments on the side of protection are useful as correctives to exaggerations of the case on the other side. It behoves not to accept even right conclusions with more confidence than they deserve. It is dangerous to exaggerate the preponderance of evidence in favour of what we believe. The balance of judgment may suffer a strain which will be felt on some other occasion where nice estimation is required. Thus Adam Smith's contention that a bounty on corn cannot be beneficial, because "the nature of things has stamped upon corn a real value" (*Wealth of Nations*, bk. iv. ch. v.), is of little moment as an addition to the weighty practical considerations in favour of free trade; while it is apt to distort the judgment on the delicate questions connected with a Measure of Value. F. Y. E.

BOUNTIES ON SUGAR.* The operation of bounties is best illustrated by a practical example, such as the sugar bounties gave. France, Austria, and Germany supplied collectively rather more than two-thirds of the total sugar production of Europe in 1890. Each of these countries granted bounties on export; Austria openly, limiting, however, the amount to be spent under this head; Germany and France (who long had bounties) in a more indirect but quite as effective way. These two, Germany for half a century and France in 1884, adopted the system of levying duties on home-produced sugar on the weight of the beetroot when delivered for manufacture. Even if established with a purely fiscal object, this system was open to the objection that it was only based on the probable average saccharine richness of the root, making no allowance for increased or reduced yield caused by varying meteorological and agricultural circumstances.

It had been admitted in Germany in 1840 that 20 centners of roots would give 1 centner of raw sugar. Thirty years later the proportions of 12·5 to 1 had been reached. Notwithstanding the more stringent fiscal legislation which ensued, the factories continued to spread wonderfully, and the production of sugar trebled between 1877 and 1884. From 1875 to 1884 the annual exports had increased in an almost fabulous proportion.

About this time, although protected by a *Surtaxe* on foreign sugar, the French manufacture rather declined; the annual production had remained stationary, but on foreign markets France was beaten by German competition, and the exports had fallen from 327,000 to 184,000 tons.

Assailed by clamours of distress, the French ministry resolved in 1884 to apply the system which, as German economists boasted, had in their country performed an "educational mission" (*eine erziehende Mission* as it is called in Schönberg's *Handbuch der Politischen Oekonomie*, article "Zuckersteuer"). The French minister of finance declared that the proposed law would act as a law of progress, stimulating the improvement of agriculture, the adoption of improved machinery, and consequently ensuring a considerable increase of the quantities of sugar extracted. Up to 1st September 1887 the factories were allowed an option between the old and the new system, but, after that date the duty was to be uniform, imposed on the basis of a legal yield of 6 kil. 250 of refined sugar for 100 kil. of roots, and this percentage was to be gradually increased, so as to reach 7 kil. in the present year (1890).

It cannot be denied that what had been stated to be the principal object of the law of 1887 was fully realised. Everywhere the "fabricants" abandoned the antiquated process of extraction by presses for the more exhaustive system of *diffusion*. To reconcile their own interests with those of the farmers, they supplied the latter with seeds of richer and less bulky varieties of beetroot, and agreed to pay higher prices for higher saccharine degree. More land (about 200,000 instead of 120,000 hectares) was employed for this cultivation, and as beetroot affords the opportunity of a better rotation of crops, it promotes the growing of wheat, that favourite of French farmers and landowners.

In Germany the task of the revenue officers ended with registering the weight of the roots. In France they were instructed to keep a strict control over the whole fabrication and an account of the sugar, raw or refined, which

left the factory. Government was thus enabled to ascertain if a surplus was obtained which remained "duty free" at the disposal of the manufacturer. It was thus found that during the three years since the law was passed (1887) the *real* extraction had amounted to 7·27, 8·12, and 8·87 per cent, and that the quantities of duty free sugar had amounted respectively to 22·56, 31·21, and 36·44 per cent of the whole French production. The treasury had been a loser by 25, 43, and 92 million francs (say £1,000,000, £1,720,000, and £3,680,000 sterling) in bounties to manufacturers and refiners (*Bulletin de Statistique*, January 1888). To counteract this drain the legal yield was raised so as to reach 7 kil. 750; moreover a special duty of 30 frs. (say £1 : 4s.)—the ordinary duty being 60 frs. (say £2 : 8s.)—was imposed on the surplus sugar. In Germany the legal yield had already been increased in 1883, and the drawback was afterwards lowered by about 5 per cent.

Although the joint production of France and Germany doubled in the ten years 1880-1890, there was only a temporary reduction of price for the French consumer of loaf sugar (96 and 98 frs., say £3 : 16 : 9 and £3 : 18 : 4, per 100 kil. in 1886 and 1887); in 1890, as in 1884, it again cost him 104 frs. (£4 : 3 : 2). The foreign purchaser alone had beyond question gained, and the staunchest supporters of the factories confessed that England obtained French sugar 6 frs. (say 5s.) per 100 kil. cheaper than it could be purchased in France. Only they shifted the responsibility on the bounties enjoyed by the French refiners, the rival brothers of the "fabricants" (Poullin, *L'Impôt sur les Raffineurs*, Paris, 1890). As the refiners were, however, henceforward to be subject to the constant supervision of the officers (*exercice*) and were to pay the duties on the manufactured produce, there would not be much left of disguised bounties for them. In fact the system of the *impôt à la consommation* or *Fabrikatsteuer*, already adopted in Austria and Russia, alone gave all parties concerned a clear insight in this maze of conflicting interests. Bounties might still exist, as in Austria, but it would be known to what extent. With the actual French and German system, it was impossible to determine beforehand the amount of bounty which will be awarded; this varied almost in every case, according to the soil, the accidents of the season, and the skill and industry of the manufacturer.

[The *Liste Générale des Fabricants de Sucre*, Paris, gives a compendium of the legislation in France and other countries. No special book, up to date, on the subject can well be named, which can only be studied in the files of special papers, as *Le Journal des Fabricants de Sucre*, *La Sucrerie Indigène*, Licht's German Reports; all these, however, are written with a strong bias. See also Sir T. H. Farrer, *Free Trade versus Fair Trade*, 2d ed., chapter on sugar.] E. Ca.; E. L. H.

The German Reichstag in the session May 1891 voted a law doing away with the system of taxation according to the weight of the beet roots. In future the duty was to be levied on the quantities of sugar produced. Direct premiums of 1·25 to 2 marks (say 1s. 3d. to 2s.) were allowed during 5 years on every 100 kil. exported, the duty being 18 marks (say 18s.) per 100 kil.

BOURGEOIS (Fr.) was no doubt originally citizen of a town in the wide sense, but (unlike *citoyen*) it has been constantly narrowed into a term of disparagement. So it means commoner as opposed to noble ("Bourgeois Gentilhomme," in Molière's comedy of 1670, is really a playful union of opposites), civilian as opposed to military, rude as opposed to refined. At present in the language of social agitation it means employer (patron) as opposed to workman (ouvrier); and the title Citizen King, on which Louis Philippe prided himself, would now be no compliment, simply king of the middle classes. So in the discussions of the Miners' Congress at Paris, 1891, in regard to the proposed general strike: "la bourgeoisie vous pousse à la faire, parce qu'elle est préparée à ce moment" (report in *Le Temps*, 3d April 1891). J. B.

BOURSE. A French word for—(1) The meetings of bankers and merchants for the transaction of business; (2) the place where such meetings are held. The French Code de Commerce defines the Bourse de Commerce as the meeting of merchants, masters of vessels, stock and bill brokers (agents de change), and merchandise brokers (courtiers), which is held under the authority of the government (Code de Commerce, § 71). The same definition may be given to this word and its etymological equivalents (borse, borsa, bolsa, etc.) in most countries if we omit the government authority, which is generally unnecessary. The word used in the sense referred to is in all cases also used for the place of meeting. As to England, see Change. E. S.

BOURSE DU TRAVAIL, a labour exchange, or registry, for the use of persons offering or seeking employment. There is at present (1890) a workmen's movement in France and Belgium for the extensive establishment and intercommunication of such institutions, which have long been advocated by M. de Molinari. The municipal council of Paris voted 1,200,000 francs (£48,000) to found a *bourse du travail*, which was installed on 20th June 1887, at 35 Rue Jean-Jacques Rousseau, Paris, pending the transformation of the old corn market. The administration consists of workmen chosen by different trade-unions. Employers are not represented. Some irritation exists as to the exclusion of several workmen's associations. The bourse, it is alleged, is confined to a clique. *Bourses du travail* have been formed at Nîmes, St. Etienne, Marseilles, and some other places in the provinces. [See Labour Exchange, App. Vol. II., and Unemployed, App. Vol. III.] H. H.

BOWEN, FRANCIS, born 1811, died 1890; he graduated from Harvard College in 1833; was instructor there from 1833 to 1847, and professor in Harvard University from 1853 to 1889. Professor Bowen's interests and attainments were great and varied. He wrote not only on economic topics, but on history, politics, the classics, and most of all on the subject connected with his professorship — philosophy. He was editor of the *North American Review* from 1843 to 1854, and in that capacity, as well as in independent publications, gave the fruits of a vigorous intellect and a remarkable industry. His economic writings in the main are in the nature of text-books, stating and illustrating the doctrines of the classic economists. But on the subject of international trade he diverged, and reasoned in favour of the doctrine of protection. He laid stress on the need of national independence, and of aiding young industries; and he made application also of MILL'S reasoning as to the possible effects of duties on the play of international demand. On this subject, as on all he touched, he was clear, positive, and effective, and his reasoning is much above the level of that usually adduced against the principle of free trade.

The larger writings of F. Bowen on economics were: *Principles of Political Economy*, Boston, 1856; *American Political Economy*, New York, 1870. F. W. T.

BOXHORN, MARCUS ZUERIUS, born 1602 (or 1612) at Bergen-op-Zoom (North Brabant), was professor of rhetoric at the university of Leyden, 1632; professor of history there, 1648; and died 1653. He wrote no books exclusively on economics, but dealt with economic subjects in the following works:—

1st, *Institutiones politicæ*, Lipsiæ, 1650; following editions (Hagæ Comitis, 1668, Ultrajecti 1702).—*Cum Commentariis eiusdem et observationibus Georgii Hornii* (his successor at the university).—2d, *Disquisitiones politicæ, i.e. 60 casus politici ex omni historia selecti* (Hagæ Comitis, 1650).—3d, *Commentariolus de Statu confœderatarum provinciarum Belgii* (2d. ed. 1650), and an extract of it: *Reipublicæ Batavicæ brevis et accurata descriptio.*—In a special work, *Dissertatio de Trapezitis, vulgo Longobardis, qui in fœderato Belgio Mensas fœnebres exercent* (Lugd. Bat. 1640), Boxhorn treated the question of interest. According to him a principal duty of government is the promoting of industry, not only by indirect ways (*privilegiis, itinerum securitate*, etc.), but by direct ones too, guilds preventing merchandise from deteriorating, and therefore trade from declining. A well-regulated currency is also of extreme importance. His ideas on taxes are, considering his date, remarkable. Taxes should be levied conveniently, ought to be proportionate to the wealth of the contributors, and may be used as a means even to promote morality. They should never be imposed on articles of export except on those nowhere else obtainable. A. F. V. L.

BOYCOTTING, an expression of recent origin, and derived from the name of Captain Boycott, who was the first known person subjected to the treatment indicated by it. Captain Boycott (the name is sometimes written Boycatt) was, in 1880, living at Lough Mask House, County Mayo, as land agent to Lord Erne, an Irish nobleman. The circumstances which gave rise to the term occurred during the land agitation of 1880-1881. A boycotted person is cut off from all intercourse with his neighbours; nobody is allowed to take his land, to work for him, to supply him with goods, or to help or assist him in any way. This treatment has in many districts of Ireland been applied to landlords, who, in the opinion of the agrarian association by which it is directed, have been harsh to their tenants; or to persons who have taken farms the former tenants of which had been evicted; or generally to persons who in their dealings with landlords have not conformed to the instructions laid down by the association to the power of which the tenant farmers of the district submit. Persons who combine to compel or induce any one to take part in the process of boycotting may under the general criminal law be subject to a prosecution for conspiracy, and, in so far as this is the case, they may in a district proclaimed under the Criminal Law and Procedure (Ireland) Act, 1887, be tried by a court of summary jurisdiction (50 & 51 Vict. c. 20 § 2 [1]).

[The word boycotting is now frequently used in a wider sense, meaning simply avoiding, holding aloof from, and in that sense it has also been introduced into foreign languages (German, *boykottiren*; French, *boycottier*). For the boycott in America see article, *Economic Journal*, vol. i. No. 1. *The Boycott as an Element in Trade Disputes*, by John Burnett.] R. S.

BRADLAUGH, CHARLES (born 1833, died 1891). Bradlaugh was best known as a radical reformer, secularist, and neo-Malthusian. But towards the end of his life, when he was allowed to take his seat in the House of Commons for Northampton, and his force of intellect received fair scope, he confined himself mainly to political work, and especially to questions affecting labour, finance, and Indian government. Though he never read for the bar, he had a wide and accurate knowledge of law; and, throughout his whole career as an agitator, he always (like COBBETT) strove to keep every movement in which he was concerned within the bounds of strict legality. He was a staunch free-trader and individualist; and his latest published writing was in opposition to the proposal for a legal restriction of the hours of adult labour. J. B.

BRANDS AND OTHER CERTIFICATES OF QUALITY, GOVERNMENT. The most important case in which the British government gives a guarantee of the quality of an article of

commerce is that of the crown brand on barrels of herrings cured in Scotland. Till 1830 a bounty was paid on barrels which were branded as coming up to a certain standard of quality, and after the bounty was abolished the practice of branding barrels which reached the standard continued. In 1856 Messrs. Bonamy Price and F. St. John, and Capt. B. J. Sulivan, were commissioned to inquire whether it would be better to abolish the brand or charge a fee for it, as the Treasury was no longer willing to pay for the inspection which it involved. Messrs. Price and St. John (Captain Sulivan dissenting) recommended that it should be maintained and 4d. a barrel charged for it. This plan was adopted. In 1881 a committee of the House of Commons made an exhaustive inquiry as to its effects, and by a large majority reported in favour of maintaining it. Opponents of the brand say that it is inimical to improvements in curing, that it encourages speculation, and that, though it affords no real guarantee, curers are obliged to apply for it by the unfounded prejudices of their continental customers, which would necessarily disappear with its abolition. Its supporters maintain that it enables small and little-known curers to compete with great houses, and prevents frauds, and they add that as application for the brand is purely voluntary, branding would fall into disuse if it were really of no value.

The arrangements of the Cork butter market necessitate the testing and branding of butter by an official inspector, a system condemned by the royal commission on agriculture in 1881. Under acts of parliament passed in 1864, 1871, and 1874, all chain-cables and anchors sold for British ships have to undergo an official test and obtain the official stamp. Gun barrels are subject to similar regulations, and many gold and silver articles cannot legally be sold without the hall mark. In all ordinary cases the buyers are obviously the best judges of the kind of commodity they want, and their demand suffices to cause its production and in many cases its progressive improvement in quality. "Caveat emptor (*q.v.*) is the sound general rule economically and socially as well as legally" (Farrer, *State in Relation to Trade*, p. 150). A government certificate is likely to be of value only when it certifies to quite definite facts which are not easily ascertainable by the buyers. It is admitted by nearly every one to be useful in the case of coins, which are pieces of metal certified by a government stamp to be of a certain weight and quality.

(See Administration ; Conditioning ; Laissez faire.)

[Report on the Fishery Board of Scotland, Parl. Papers, 1857 (65 Sess. 1), xv. 39.—Report on Herring Brand (Scotland), Parl. Papers, 1881, 293, ix. 1.—T. H. Farrer, *The State in Relation to Trade*, pp. 145 to 151.—J. S. Mill, *Principles of Political Economy*, bk. v. ch. xi. §§ 7 and 8.]

E. C.

BRASSAGE. A charge made for coining, sometimes called a seigneuriage. The word means "strictly the stirring in the furnace of the molten metals, and next the allowance made to the individual by whom the operations of coining were farmed" (Paper by J. B. Martin "Seigneuriage and Mint Charges" (*Journal, Institute of Bankers*, April, 1884). No charges of this description are made at the royal mint in England, though they are made at the branches of the mint at Sydney and Melbourne (see Mint). In England the Bank of England, by arrangement with the government, buys gold at £3 : 17 : 9 per standard ounce, and sells again at £3 : 17 : 10½. In France, a charge exists of 6·70 frs. per kilo (= ·0025) equivalent to about ½d. per £ sterling, the corresponding expense in England, covered by the arrangement made with the bank named above, being estimated at $\frac{3}{10}$d. per £. The advisability, or otherwise, of making such a charge appears to be an open question which can best be decided by those immediately concerned.

["Seigneuriage and Mint Charges," by J. B. Martin, *Journal of the Institute of Bankers*, April 1884.—*Seigniorage and Charge for Coining*, Ernest Seyd, 1868.—*Arbitrages et Parités*, Ott. Haupt, 1883.—*Report, International Coinage Commission*, 1868.—*Mint Reports*, etc.]

BRASSEY, Thomas (1805-1870), born in Cheshire, where his family had flourished for six centuries, illustrated an ancient house by his distinguished success in the new calling of railway contractor. In his dealings with labourers in different parts of the world—employing the English navvy at 3s. 6d., the Indian coolie at 6d. a day—Brassey had an unrivalled opportunity of verifying the truth that the cost of labour to the employer is not proportioned to the amount of daily wages. He is even said to have found "that for the same sum of money the same amount of work was everywhere performed" (*Work and Wages*, by Mr. Thomas (later Lord) Brassey, ch. iii. ; *Life and Labours of Mr. Brassey*, by Sir Arthur Helps, ch. v., end). But this proposition, understood exactly, is not only, as Cairnes points out (*Leading Principles*, pt. ii. ch. iii. § 7) *a priori* improbable, but inconsistent with several of Brassey's experiences. With respect to many other questions, the comparative efficiency of labour in different countries, the effect of short hours on efficiency, the alleged deterioration of the labourer—the experiences of Brassey recorded by his son in the work referred to are valuable to the economist. Mr. Frederic Harrison's interpretation of the facts stated by Lord Brassey is remarkable (Review of *Work and Wages* in the *Fortnightly Review* for 1872).

[For the particulars of Brassey's noble and beneficent life, see Sir Arthur Helps's *Life and Labours of Mr. Brassey*.]

F. Y. E.

BRAY, Charles (1811-1884) born at Coventry, was a ribbon manufacturer in that city, but

retired from that business in 1856. From his youth upwards Bray had been active in social and educational reforms; and in his principal work he proceeded on the lines of OWEN and CARLYLE, advocating CO-OPERATION and organisation of labour against COMPETITION.

See the 2d vol. of *The Philosophy of Necessity; or, The Law of Consequences, as applicable to Mental, Moral, and Social Science*, by Charles Bray, London, 1841, pp. 301-389, 2d ed. 1863, 3d, 1889. The appendix to this work has been published separately in 1844 (*An Outline of the various Social Systems and Communities which have been founded on the Principle of Co-operation*); this was written by his sister-in-law, Mary Hennell (*d.* 1843), and gives valuable information on socialistic doctrines in England. Bray's other works concerning social economy are: *Address to the Working Classes on the Education of the Body*, 1837 (see his autobiography, *Phases of Opinion and Experience during a Long Life*, 1884, ch. vi. and vii.) *An Essay upon the Union of Agriculture and Manufactures, and upon the Organisation of Industry*, 1844, and two papers read before the British Association for the Advancement of Social Science, October 1857: *The Industrial Employment of Women*, and *The Income of the Kingdom, and the Mode of its Distribution*, in which he computes that one-seventh of the population possess two-thirds of the annual income.

[Holyoake, *The History of Co-operation in England*, 1875, vol. i. p. 17, 329n.—A. Menger, *Das Recht auf den vollen Arbeitsertrag*, 1886, p. 58.] S. B.

BRAY, J. F., early in 19th century, is the author of *Labour's Wrongs and Labour's Remedy; or, the Age of Might and the Age of Right*, Leeds, 1839. He was a follower of OWEN and Thomson; his book tries to prove "that all those who perform equality of labour ought likewise to receive equality of reward" (p. 30), and though he admits that even this does not involve perfect justice, that "such equality is infinitely more just than the mode of rewarding labour under the present system" (p. 206). Impressed by the modern growth of joint-stock companies, Bray proposes a "joint-stock modification of society, admitting of individual property in productions in connection with a common property in productive powers" (p. 194), and proposes a paper and pottery currency, whose foundation is labour, in order "to secure the public against any other variations in the value of the currency than those to which the standard itself is subject" (pp. 143, 198). This book is, notwithstanding all illusions, written in a remarkably lively style.

[Holyoake, *The History of Co-operation in England*, 1875, vol. i. p. 224.—A. Menger, *Das Recht auf den vollen Arbeitsertrag*, 1886, pp. 58, 94 (corrects the statements given in K. Marx, *La misère de la Philosophie*, 1847, p. 62).] S. B.

In Bray's work, mentioned above, *Labour's Wrongs and Labour's Remedy, or the Age of Might and the Age of Right* (Leeds, 1839), the current economical doctrines were examined with acuteness and force, and were said to involve "that under the present system there is no hope for the working man." At present (Bray considers) no political or fiscal reforms, and no TRADE UNIONS or SAVINGS BANKS, will permanently lessen poverty. So long as property, whether in land or in the instruments of production, remains as it is, one man's gain is another man's loss; the only way to be rich is to seize the fruits of another man's labour; and the only permanent remedy is a complete overturning of the present system and an organising of production by the community itself. In place of individual employers would come groups of joint-stock companies under general and local boards of trade. All men would be workers, and would receive "the whole fruits of their labour." The labour necessary to life would gradually fall from 8 or 10 hours a day to 5 hours, production being immensely increased by the new system, and being likely to keep ahead of population "for thousands of years." Among writers of his school Bray deserves more recognition than he usually obtains. His errors of theory (such as the confusion of value with cost) are not peculiar to him, but are shared by Karl MARX and (generally speaking) the Ricardian school of socialists. J. B.

BREACH OF TRUST (Scots criminal law term). Fraudulent appropriation by trustee, or failure in duty by official, etc.

BREACH OF TRUST. Any act or omission on the part of a trustee violating the conditions of the trust or the rules of law concerning the investment or administration of trust property. The liability of trustees for breach of trust is a very stringent one, but the Trustee Act 1888 (51 & 52 Vict. c. 59) has relaxed it to a certain extent. It is, for instance, the rule that advances on mortgage of freehold property must not exceed two-thirds of the value of the mortgaged property. According to the former law trustees having once gone beyond the limit were liable for whatever loss might subsequently have been incurred; since the date of the new act they cannot be called upon to replace more than the difference between the amount which they would have been authorised to advance and the amount actually lent. The trustees are also placed in a more favourable position with regard to unauthorised investments made at the request or with the consent of a beneficiary. In the case of express trusts the trustees were not authorised to plead any statute of LIMITATIONS, but they may now, in the absence of fraud or misappropriation, rely on the statute. E. S.

BRECK, SAMUEL, was born in 1771 in Boston and afterwards settled in Philadelphia. He wrote in 1843 a small pamphlet, *Historical Sketch*

of Continental Paper Money, Philadelphia, pp. 40. In this he attempts to demonstrate that the non-redemption of the paper money after the revolution acted as a moderate tax by reason of its gradual depreciation, and that the issue was not so unfortunate as is generally claimed. Throughout his life—in congress and in private—he took a decided stand in favour of internal improvements. For details see *Memoir* by J. Francis Fisher, Philadelphia, 1863, pp. 45.

D. R. D.

BREHON LAW. The Brehons were a hereditary class of judges in Ireland, to whom disputes were referred for arbitration, and whose decisions were regarded as binding, though there was no sanction to enforce them. It is probable, though by no means certain, that the Brehons were descended from the earlier Druids, who lost their priestly functions on the introduction of Christianity, but retained their judicial power. The decisions of the Brehons formed a vast mass of customary law, a knowledge of which was the exclusive property of the class. Gradually this law was reduced to writing, and has been preserved to us in the *Senchus Mor* and the *Book of Aicill*, which have been published in the Irish Rolls Series.

The Brehon law throws great light on the important part played by consanguinity in the formation of society. The unit of the social system in Ireland was the *tuath* or tribe, consisting of the real or supposed descendants of a common ancestor. The tribe owned a district of land, which was unequally distributed for occupation among its free members. Rank, originally a matter of birth, had come to depend mainly upon wealth, and wealth was estimated not in land but in cattle. The authority of the tribal chief belonged to him, not as lord of the land, but because he supplied cattle to the poorer occupiers of tribal land. For this grant the recipient had to pay a rent either in kind or in service. The more cattle belonged to a *flaith*, or noble, the larger number of retainers could he possess, and the higher was his social position. The lowest freeman was the *oc-aire*, who possessed a cottage, and a right over the common pasture. If he could acquire ten cows he rose to the rank of *bo-aire*, or cow possessor. As time went on the nobles gradually seized the unoccupied portions of the tribal land, and the idea of private property supplanted the earlier theory of joint ownership.

But a clear trace of the latter survived in the rule of succession, known as GAVELKIND (*q.v.*) On the death of the occupant of land, the estate passed neither to his eldest son nor to the joint or separate occupation of his children. On the contrary the land fell back into the common property of the tribe, and the chief made a redistribution of all the lands among the members. This custom is unquestionably due to the original idea that a tribe constituted a family, and that the whole kindred were joint-heirs of any individual member. But gavelkind did not apply to the succession to the lands of nobles, which was regulated, like the succession to the office of chief, by the custom of TANISTRY. By this custom a successor or *tanist* was elected by the members of the sept or tribe during the lifetime of the chief or noble. The object was to secure the succession of the fittest member of a family instead of merely the nearest blood relation.

Both gavelkind and tanistry were disliked by the English rulers, as being less definite and orderly than the rule of PRIMOGENITURE. Under James I. they were abolished as "lewd and damnable customs." From this time the Brehon law was jealously suppressed, and the English legal system, which had hitherto been enforced only in the counties of the PALE was now applied to the whole of Ireland.

[*Ancient Laws of Ireland* (Irish Rolls Series).—O'Curry, *Manners and Customs of the Ancient Irish*.—Maine, *Early History of Institutions*.—Richey, *A Short History of the Irish People*.]

R. L.

BREVI MANU TRADITIO. An expression used by mediæval writers on Roman law to express the fictitious delivery which takes place, when a person who is in physical possession of another person's property acquires the ownership of the same by purchase or otherwise.

BREWSTER, SIR FRANCIS (fl. 1674-1702), was in 1674 lord mayor of Dublin, and in 1698 appointed commissioner to inquire into the forfeited estates in Ireland. He wrote *Essays on Trade and Navigation. In Five Parts—The First Part*, London, 1695. They seem to be written with the design of supporting the Dutch against the growing commercial power of the French. He proposes a council of trades, a national bank, hospitals, working schools, and the naturalisation of foreign protestants, especially in Ireland; he makes objections to the projects of erecting free ports and recommends sumptuary laws. His statement that England upon an average of six years gained by Ireland two millions sterling per annum, and his denunciation of the oppressive treatment to which that country was subjected (p. 15 ff.) were strongly controverted by DAVENANT (see his Works, edited by Ch. Whitworth, vol. i. p. 377). His *New Essay-s* (sic) *on Trade*, 1702, make him rank among those pessimistic authors who constantly foresee the decline of trade (p. 2). Nevertheless he insists upon the necessity of allowing the exportation of wool, England being not able to work up two-thirds of its own, and forced "either to Burn or Export it" (p. 9). He recommends manufactures as a means of employing the poor (p. 124). "I think him a great Man that employs Twenty Men at his Looms, and Five Hundred Spinners, and wonder

we have no more such in Parliament" (p. 11). He recognises the dangers of the money projects (p. 20), and of the stock-jobbing mania of his age (p. 30). In all other respects his mercantilist views are the same as in his first essays (see *e.g.* p. 41), and only his considerations on the advantage of a union between England and Ireland (pp. 66-115), with many statistical abstracts, may be considered as valuable.

[Macleod, *Dictionary of Pol. Econ.*, p. 284.]

S. B.

BRIGANTI, Filippo, born at Gallipoli 1725, died 1804. In 1780 he published, in two volumes, his *Esame economico del sistema civile* (viz. Economical Analysis of Society), which is really a refutation of the social doctrines of Mably, Rousseau, and Linguet, particularly of their paradoxes concerning the obnoxiousness of commerce, industry, and intellectual progress. Briganti was a profound thinker, and had a vast fund of information. Discussing the advantages of exchange and commerce, he anticipates many of the views which are now advanced in this connection concerning sensations of pleasure and pain, and, in general the hedonistical calculus, as the basis of economical activity. In tracing the history of human progress and following it up in the history of agriculture, commerce, navigation, population, and intellectual and moral development, he shows himself to be possessed of a great store of information. His book, however, has lost its interest, because its principal object, viz. the refutation of Rousseau's theories, has likewise ceased to interest.

M. P.

BRIGHT, John (*b.* 1811, *d.* 1889) M.P., president of the board of trade (1868-1870), eminent orator and statesman. The creation of a numerous proprietary in Ireland was eloquently advocated by Bright. The clauses in the Irish Land Bill of 1870, which facilitate the sale of land to tenants, are ascribed to his influence and associated with his name. The part which Bright played in the abolition of the corn laws is also memorable. But there are limits to the application of the idea of non-intervention which did not occur to him. He carried the principle of Laissez-Faire so far as to oppose factory legislation; concerning which he thus defines his position—"I was opposed to all legislation restricting the work of adult men and women. I was in favour of legislation restricting the labour and guarding the health of children."

[*Speeches on Questions of Public Policy*, edited by J. E. Thorold Rogers, 1868; Hansard, lxxiii. p. 1132, lxxxix. p. 1136, cxciv. p. 731, *et passim*; *Public Letters*, edited by J. Leech, 1885.]

F. Y. E.

BRINDLEY, James (born 1716, died 1772), an eminent engineer, celebrated for the construction of canals, of which the earliest and most famous, connecting Manchester with Worsley and Liverpool, was executed under the auspices of the Duke of Bridgewater (1759-1773), and called after his name. Almost totally uneducated, Brindley owed his success to the sheer force of genius. In thinking out his mechanical designs he sought no aid from books or models; and would even, for the purpose of greater abstraction, retire to bed for two or three days. The saying that "the natural use of rivers was to feed navigable canals," is characteristically attributed to Brindley.

[*Bibliotheca Britannica.—Lives of the Engineers*, by Smiles.]

F. Y. E.

BRISCOE, John (17th century), ranks second to H. Chamberlin among the projectors of land banks who flourished in the latter part of the 17th century. Briscoe's project is set forth in his *Discourse on the Late Funds . . .* (1694, third ed. 1696). An *Abstract* of this discourse, and also a *Dialogue* (between Freeholder and Philanglus) "explanatory" thereof followed soon (1694) from Briscoe's pen. He continued in a series of broadsheets to repeat with variations his proposals for setting up a land bank. A proposal which he made for regulation of the coin (1695) is not unconnected with his darling project. He accuses J. Asgill (*q.v.*) of having appropriated his ideas, see *Mr. John Asgill, his Plagiarism detected, . . .* 1696. Briscoe himself is accused of plagiarising from Chamberlin, by the author of *A Rod for the Fool's Back, or Dr. Chamberlin and his Proposals Vindicated*, 1694, attributed to Chamberlin. However, Briscoe appears as the "literary advocate of Chamberlin's land bank" (Thorold Rogers) in a letter to the doctor dated 1693, published in 1696 by Chamberlin. In some remarks prefixed to this letter Chamberlin speaks of the "great reputation Mr. Briscoe hath among some of our senators." Chamberlin adds (at the end of the letter), "As a stronger confirmation of the good opinion Mr. B. had of the doctor's 100 years proposal, he subscribed £200 per *annum*." Briscoe shares with Chamberlin, in proportions which it is not easy to assign, the responsibility of having originated the *land bank*, which proved such a complete failure in 1696 (see Hugh Chamberlen or Chamberlin).

[Macaulay, *History of England*, ch. xx. and xxii. (vol. iv. pp. 496 and 701, large 8vo ed.)—Thorold Rogers, *First Nine Years of Bank of England*, pp. 15 and 50.—*Quarterly Journal of Economics*, vol. ii. p. 490.—Macleod's *Dictionary*, *sub voce* "Briscoe."]

F. Y. E.

BRISSOT DE WARVILLE, Jean-Pierre, was born 1754, at Ouarville near Chartres. He was executed in Paris in 1793. After having been imprisoned in the Bastille, he went to England and to the United States, and returned to Paris at the outbreak of the Revolution, in which he played a remarkable part, being accused of federalism by Robespierre. After the revolu-

tion of 31st May 1793, he was proscribed; he tried in vain to escape, but was arrested, and died on the scaffold, 31st October 1793. In his writings, Brissot de Warville advocated the reform of the penal laws and attacked the slave-holders in the colonies.

His works are collected under the title: *Bibliothèque philosophique du législateur, du politique, et du jurisconsulte* (10 vols., Berlin, 1782-1785). One of these works is remarkable on account of its influence on later socialists: *Recherches philosophiques, sur le droit de propriété et sur le vol considérés dans la nature et dans la société*, 1780 (Bibliothèque, etc., vol. vi. p. 260 ff.). The defence of the right of property by the PHYSIOCRATS as being founded in nature, and the ridicule bestowed upon this axiom by VOLTAIRE in his *Homme aux quarante écus*, induced Brissot de Warville to inquire into the justifiability of this doctrine in the natural and actual state of society. He reasons thus: the natural title of property being the human wants of self-preservation and freedom of locomotion (p. 274), there is no property beyond these limits founded in nature. But civil property reaches farther. "In the state of nature everybody has a right to all; in the social state a man who has nothing left by his parents has a right to nothing. The thief in the natural state is the rich man, who possesses superfluities; in the social state he is called a thief who steals them from the rich. What an upturn of ideas!" (p. 332). The object of this work was to mitigate the rigour of the penal laws against theft. In this direction its effect was not inconsiderable, but its influence upon the formation of the creed of Babeuf and Proudhon has incidentally been distinctly greater (see BABEUF; COMMUNISM; PROUDHON).

[Villegardelle, *Histoire des idées sociales*, etc. 1846, pp. 124-129.—J. J. Thonissen, *Le Socialisme*, 1852, vol. i. pp. 286-291.—A. Menger, *Das Recht auf den vollen Arbeitsertrag*, 1886, pp. 8, 40, 71.]

S. B.

BROGGIA, ANTONIO, a learned Neapolitan merchant, also a politician and author of two treatises, one on taxation (*Trattato dei tributi*, 1743), which was translated into German, and the other on money (*Trattato delle monete considerate nei rapporti di legittima riduzione, di circolazione e di deposito*, 1743). Both treatises are still interesting to read, as they contain a great deal of what at the present time is still taught and thought correct concerning these subjects. As is natural for a writer living when he did, Broggia is not free from physiocratic prejudices. In his treatise on taxation he says the aim of the theory is the wealth of the state; wealth reposes on the development of agriculture, industry, and commerce; industry in general ought to be left free and not hampered by vexatious taxes; the working classes, and especially peasants, ought to have their interests particularly considered, as on their welfare depends much of the prosperity of the state; tithes are the least oppressive taxes and the surest; taxes ought not to be personal; care must be taken that taxes do not crush out trades; agricultural animals and machinery and tools ought not to be taxed. State monopolies are unadvisable. Excise and custom duties ought not to be leased out by the government. The direct land tax, if necessary, ought to be increased rather than custom duties imposed. Notwithstanding his predilection for taxes on rent, Broggia is not in favour of one single tax. He shows the advantages of indirect taxes as complementary; he only insists strongly on custom duties being moderate, so as not to molest trade. In his treatise on money, a cardinal point is that the wealth of a country does not depend upon the quantity of money existing in it or in circulation, but upon the amount of the turnover in business. In 1754 Broggia was exiled from Palermo for having written a pamphlet against the ministers. This pamphlet (a volume in 4to of 136 pages) was a criticism on their acts. He wrote also a treatise on public hygiene (*Trattato politico della sanità*). This treatise and the two other ones before mentioned constitute one single volume in the original and only edition, which was published before Custodi took up classifying, correcting, and publishing Broggia's writings. The title of the first edition is: *Trattato dei tributi, delle monete e del governo politico della Sanità*. In Napoli, presso Pietro Palombo, 1743. As a complement of his monetary doctrines must be considered a pamphlet he wrote in defence of them under the extraordinary title which follows: *Risposte alle objezioni state fatte da varj Soggetti, intorno al sistema del prezzo corrente, che assolutamente dee tenersi per la ricompensa degli arrendamenti, e similmente a quelle state anche fatte intorno alla rinnovazione della moneta di rame, che dee anch' essa avere tutto quel valore intrinseco che di giustizia gli spetta; e tanta farsene che non ecceda il puro bisogno degli scambj minuti*, Napoli, a dì 14 Novembre 1755. Of his life no particulars are known, not even when he was born and when he died. It is commonly maintained that he was born in 1683, and that he died in 1767, but the dates are contested. His works are included in the Collezione CUSTODI.

M. P.

BROKER, GENERAL. A broker may be generally described as a go-between, who brings buyers and sellers together; not exactly face to face, but acting as an intermediary who introduces their bargains rather than their persons. The position is a responsible one, inasmuch as the principals who employ a broker very often keep a running account and trust him, in goods or money, to large amounts. As a rule, brokers are under the rules of a syndicate or corporate body of which they become members, and to whose rules they are usually amenable on pain of expulsion. There are tea brokers, coffee brokers, sugar brokers, and so on without end in almost every wholesale trade, and their practice

varies with their standing, some brokers being virtually factors or warehousemen, others being simply agents, paid by fee, instead of by a varying salary. A. E.

BROKER, Stock. A stock-broker may be either a member of the stock exchange of London, Dublin, Manchester, Liverpool, Glasgow, or elsewhere; or only what is known as an outside broker. His duty is to buy or sell for a "principal." On the London stock exchange, nobody who is not a recognised member is permitted to deal. A broker, having received an order to buy say £500 stock, goes to any member of the stock exchange, known indifferently as a jobber or dealer, and asks for a quotation. The dealer quotes two prices, say 80¼ to 80½, meaning that he will sell to the broker at the higher price and buy at the lower quotation. If the broker consider this fair he will say, "I buy £500 at 80½," and the contract is binding between these two members of the stock exchange. Members, their admitted clerks, or officials only are permitted to enter the London stock exchange, therefore brokers must be employed by all outsiders desirous to do business there. A. E.

BROKERAGE. A charge made by a broker on the purchase or sale of securities or other property.

BROUGHAM, Henry (born 1778, died 1868), Baron Brougham and Vaux, lord chancellor, touched nearly all subjects and adorned some by his eloquence and dialectical skill. The contact seems least superficial, the ornament particularly solid, in the case of political economy. Brougham's first considerable work was *An Inquiry into the Colonial Policy of European Powers*, 1803. Criticising Adam Smith, he maintains that the monopoly of the colonial trade did not produce all the detrimental effects ascribed to it (bk. i. § 2, part ii.) Referring to the slave colonies, Brougham not only denounces the slave trade as iniquitous—"not a trade, but a crime"—but also argues that it is unprofitable. The argument is renewed in *A Concise Statement of the Question regarding the Abolition of Slave Trade* (1804). Slavery, as well as slave trade, was assailed by Brougham's oratory (*Speeches*, published in 1838, vol. ii.)

Free trade owes something to Brougham's advocacy. He exposed the folly of retaliation, as counsel (1808) for the merchants who petitioned parliament against the orders in council directed against Napoleon's continental system. After Brougham's masterly speech in 1812, the obnoxious orders were withdrawn (*Speeches*, vol. i.) In the speech on manufacturing distress (1817) Brougham strikes at the complicated taxes which fettered trade (*ibid.*) But in the equally able speech on agricultural distress (1816) there is a good word for the corn law (*ibid.* p. 533).

Other economic topics handled by Brougham are: (1) depreciation of money, with reference to Sir E. Shuckburgh's standard (article on "Currency and Commerce," *Contributions to Edinburgh Review*, published 1856, vol. iii. p. 22; *E. R.*, Oct. 1803); (2) usury (*Contributions*, vol. iii. p. 52; *E. R.*, Dec. 1816); (3) overpopulation (speech on the poor laws, 1834, *Speeches*, vol. iii.); (4) combinations (*Transactions of the Society for promoting Social Science* for 1860, p. 51). Brougham is also to be mentioned as a promoter of education and educational institutions—the London University, the Society for the Diffusion of Useful Knowledge, Mechanics' Institutes, and the Society for promoting Social Science.

In addition to the works which have been cited may be noticed: (1) *A Manual for Mechanics' Institutions*, 1839 (by B. F. Duppa, with outlines of lectures on political economy by Brougham); (2) *Political Philosophy*, 1842; (3) *Works*, 1st ed. 1855-61, 2d ed. 1873. In the 11th vol. of the 2d ed. there is a list of Brougham's publications, numbering 133. F. Y. E.

BROWN, John (1715-1766), was vicar of St. Nicholas, Newcastle. He maintained that "commerce in its first and middle stages is beneficent, in its last dangerous and fatal"; that it is answerable for selfishness, luxury, and want of religion; and that by causing a drain of money and by the invention of machines it diminishes the population. He asserts that the country parish registers prove that from 1710 to his time the population was at least stationary. See his book *An Estimate of the Manners and Principles of the Times*. By the author of *Essays on the Characteristics*, etc., London, 1757, pp. 151, 185, 188.

[For a contemporary reference see: *A Vindication of Commerce and the Arts*. By J.-B., M.D., 1758, p. xvi., and Wallace, *Characteristics of the Present State*, 1758, p. 193.—Brown's own book *Essays on the Characteristics*, etc. is of no economic value.] S. B.

BRYDGES, Sir Egerton, Bart. (*b.* 1762, *d.* 1837). To any one disposed to make a psychological study of a defunct antiquary, topographer, essayist, bibliographer, poet, novelist, and critic, and who added to these occupations the study of political economy and occasional authorship in that science, Sir E. Brydges would afford an excellent subject. On the good side may be placed his industry and power of research, considerable originality, and a deep acquaintance with the ancient literature of England and of foreign countries. On the bad side should be ranged his excessively morbid temperament, a craze about an assumed right to an ancient barony, an intense suspicion of the motives of those who differed from him, and an unfounded notion that he was not sufficiently rewarded for his services in the cause of learning. Much

material bearing on all this exists in his *Autobiography* and *Letters from the Continent*, as well as in his voluminous published and privately printed works, which in the course of his long life extended to no less than one hundred and forty volumes. We find in a quantity of his letters, which have never been printed, addressed, from 1818 to 1832, to Mr. James S. Brooks, member of a firm of solicitors who acted for him, and with whom, in a characteristic manner, he often fell out, many striking examples of Sir Egerton Brydges' talent as a political economist. It is a curious fact that in his most desponding and brooding moments he would fly to political economy as a relaxation of thought and as a favourite study, just as many of our first-class English statesmen have relieved tension of mind and the excitement of political conflict by Homeric studies or the composition of Greek and Latin verses.

His published works touching on economics are: (1) *Tests of the National Wealth*, 1799, 8vo.—(2) *Letters on the Poor Laws*, 1814, 8vo.—(3) *Arguments for the Employment of the Poor*, 1817, 8vo.—(4) *Three Tracts on "Copyright,"* 1817-18, 8vo.—(5) *The Population and Riches of Nations considered*, Geneva, 1819, 8vo. A second edition of this was afterwards printed at the author's private Lee Press.—(6) *What are Riches?* Geneva, 1821, 8vo.—(7) *Letter on the Corn Question*, 1822, folio.—(8) *Letter on the Proposed Plan for reducing the National Debt*, Florence, 1820, 4to. Although Sir Egerton Brydges' works, above cited, contain flashes of insight into correct deductions, practical as well as theoretical, they are a good deal disfigured by his want of study of the statistics and practice of commerce, and his ignorance of business generally. F. H.

BUBBLE ACT. Popular name for an act passed in the reign of George I. with the intention of preventing the creation of joint stock companies. The name is derived from the fact that one of its objects was to protect the privileges of the South Sea Company. It had no practical effect, and was repealed in 1825. E. S.

The phenomenon of bubbles (or joint-stock undertakings the shares of which were "blown up by the air of great words") first showed itself prominently in England at the end of the 17th century (see Anderson, *Hist. of Commerce*, esp. under dates 1695, 1697), when the Royal Exchange became so crowded with projectors and stock-jobbers that they were provided with an exchange of their own, first in Exchange Alley and later in Capel Court. An act was passed in 1696 "for restraining the practices of brokers and stockjobbers." It limited the number of licensed brokers to one hundred, and put difficulties in the way of their dealing with government stock and Tallies (*q.v.*) The outburst of speculation a quarter of a century later was associated with the South Sea Company. It led to more ambitious legislation. The act specially known as the Bubble Act was passed in 1720, principally to define the privileges of the companies that were afterwards known as the London Assurance and the Royal Exchange Assurance Companies, but also to punish bubble companies for trading (*a*) under obsolete or forfeited charters, or (*b*) for purposes not allowed in their charters, or (*c*) with no charters at all. This act was not to apply to undertakings established before 1718. The South Sea Company had promoted it in the belief that the bubble companies were rivals, whereas they were really allies; money was gained in them to be invested in the greater company. As the act and subsequent royal proclamation proved ineffectual, the South Sea Company procured a writ of *scire facias* against "those airy projects called bubbles;" but the effect was to bring down the credit of small and great together (Anderson, *ib.* under date 1720, esp. p. 101 *seq.*), and to cause the ruin of multitudes of rich and poor subscribers. To relieve the sufferers acts were passed (1721) to attach the estates of the South Sea Company's directors, to relieve subscribers from part of their obligations, and (1722) to enable the company to improve its position by an arrangement with the Bank of England. The act (1722) to punish fraudulent transfers of stock may perhaps be counted the last of the series, though the affairs of the South Sea Company were a frequent subject of legislation for some years afterwards. J. B.

BUBBLES (History of). The term bubble has been commonly applied since the 17th century to any unsound commercial undertaking accompanied by a high degree of speculation. The first bubble of historical importance was connected with the growth of varieties of tulips in Holland. It reached its height in 1636 in Amsterdam, and in the most of the Dutch cities regular markets were established for speculation in the roots. In the end tulips were bought and sold like shares in a gold mine, for purely speculative purposes, without any idea of actually growing the flowers. Fabulous prices were paid for single bulbs, *e.g.* 2500 florins for a "viceroy," a "semper augustus" 5500 florins, etc. The mania spread to some extent to London and Paris, and tulips were dealt in by the stock-jobbers of both cities.

In 1719 and 1720 occurred the greatest speculative mania on record, arising from the Mississippi scheme of John Law (*q.v.*) The rage for speculation in Paris was incredible, and affected all classes of society. John Law's schemes were not in themselves, according to most modern writers, unreasonable, and in many respects he only anticipated the natural development of banking and credit, but his whole system was ruined by the extravagant speculation with which it at once became associated. The extent of the mania may be

indicated by the fact that for a time John Law became the most powerful man in France.

In England, however, the word bubble is generally associated with the South Sea Bubble which burst in 1720, and was the English counterpart of the Mississippi scheme. The South Sea Company was originated by Harley, Earl of Oxford, in the year 1711. The original idea was to found a company which should take over the floating debt of nearly ten millions, arising from the expenses of the army and navy. The company was to receive interest from the government at the rate of six per cent, and for this purpose certain duties were allocated. In addition the monopoly of trade to the South Seas was granted, and the company became known by that name; as a matter of fact, owing partly to the opposition of Spain, the trade with the South Seas, or rather South America, produced very little revenue at any time. But the directors of the company thought that they might imitate the success of John Law by other operations in finance, and they competed with the Bank of England in offers to undertake the reduction of the national debt, which amounted to about £30,000,000. After a debate in the House of Commons the proposals of the South Sea Company were accepted in preference to those of the Bank of England! Sir Robert Walpole was almost the only prominent statesman who spoke against it, and warned the House of the dangers of stock-jobbing as carried on in France. During the time the bill was being passed through the House of Commons the most extravagant rumours were set afloat, especially by the chairman, Sir John Blunt, as to the trading possibilities of the company, with the view of forcing up the price of the shares. Before the bill reached the Lords the price of the stock had reached 400. It was opposed by several peers of good standing, but was hurried through with unexampled rapidity. By this time, 7th April 1720, the whole nation had begun to be infected with the stock-jobbing mania. Exchange Alley and Cornhill were almost impassable with the crowds. The South Sea stock, which curiously enough suffered a momentary fall on the passing of the bill in favour of the company, was soon subjected to all kinds of adroit manipulation. In consequence the directors were enabled in a few days to issue a million of stock at £300 for the nominal £100, and a little later another million was issued at £400, for which "in a few hours, a million and a half was subscribed."

In the meantime, numberless other joint-stock companies were started, which soon began to be called bubbles. The highest persons in the state, including the Prince of Wales, were interested in one or more of those companies. Some of them only lasted a few days, and the infatuation was at length carried to such a pitch that one project was advertised in the newspapers as follows: "For subscribing two millions to a certain promising or profitable design, which will hereafter be promulgated." It is hardly credible that the bold projector of this scheme, in a few hours, sold 1000 shares on which he received, by way of deposit, £2 per share, and was able to decamp with £2000.

The South Sea stock continued to rise for nearly two months, and at the end of May reached about 550. At this time it took a tremendous leap of 340 per cent, and was quoted on the 3d of June at 890. On this day, however, it fell as rapidly, but was again bolstered up by the directors getting their agents to buy. The speculation continued during the summer, the stock at one time reaching 1000; but by the beginning of September a serious fall had commenced, and the directors became alarmed. Negotiations were attempted with the Bank of England, but a panic had set in which nothing could check. Thus the bubble burst after a run of eight months. The greatest popular indignation was aroused against the directors, and found expression in parliament. An inquiry was instituted and pushed on rapidly. In the sequel upwards of two millions was taken, in the shape of fines, from the estates of the directors, and they were allowed to retain only a small residue.

[Full details of these bubbles are given in Macpherson's *Annals of Commerce*, under the years named. Popular accounts are given in Mackay's *Memoirs of Extraordinary Popular Delusions*, London, 1852, and Francis's *Chronicles and Characters of the Stock Exchange*, London, 1849. See also Taverel.] J. S. N.

BUCHANAN, David (1779-1848). A journalist and economist, was a son of David Buchanan, a printer, and was born at Montrose in 1779. At an early period of his life he commenced his career as an economist by a contribution to Cobbett's *Political Register*. He contributed articles to the *Edinburgh Review*, published a pamphlet on Pitt's volunteer system (1807), contributed to the seventh edition of the *Encyclopædia Britannica*, and edited the *Edinburgh Gazetteer*. As a journalist, his experience was varied, since he was editor successively of the *Weekly Register* (1808-1809), the *Caledonian Mercury* (1810-1827), the *Edinburgh Courant* (1827-1848). As an economist, in 1814 he edited an edition of Adam Smith's *Inquiry into the Causes of the Wealth of Nations* in four volumes, the last volume consisting of additional matter supplied by himself by way of illustration and correction (this edition of Adam Smith was translated into French in 1843). In 1844 he published a work entitled *Inquiry into the Taxation and Commercial Policy of Great Britain, with Observations on the Principles of Currency and Exchangeable Value*. To a large extent this latter work is a mature reproduc-

tion of the matter contained in his additional volume of comments of 1814. While he goes beyond the theories laid down by Adam Smith, his final treatise does not indicate any development due to the study of those economic works which had been published since he began to write in 1814. He displays a considerable understanding of the causes which determine prices, and brings out with great lucidity the effect of the interaction of supply and demand. Thus he performed no little service to economic theory by disentangling the many important elements underlying the work of Adam Smith. On the other hand he failed altogether to understand the main basis of the Ricardian theory, recognising no distinction between an "increase in *wealth*" and an "increase in *value*." In consequence he is unable to comprehend the technical use by RICARDO of the term "profits," and will not allow that that author was right in asserting that a fall or rise in *profits* depended on a rise or fall in *wages*. This was owing to his misunderstanding the interpretation applied to these terms by Ricardo. Of a somewhat similar nature is his attack on the theory of rent. He confuses the theory with its practical application; while he further failed to understand the treatment by Ricardo of the case of a country where all the soil is under cultivation, but where the difference of quality as to return to respective "doses" renders the law of rent like to that obtaining where cultivation has not yet covered the whole surface. He does not give Ricardo sufficient attention in this instance, while in another he accuses him—again no doubt through misconception—of having thought and said that the high price of corn was the *effect* of the higher expense of cultivation, urging on his part that this high price it was which caused people to be willing to encounter the high expense. Again he asserts that *in theory* the tithes are paid out of the rent.

For these and other reasons it is impossible to attribute to his treatises any great value on the side of theory. On the other hand his treatment of taxation is sensible and very practical.

[*Dictionary of National Biography.—Montrose Standard*, 18th August 1848; works as cited in text.] E. C. K. G.

BUCHEZ, PHILIPPE JOSEPH BENJAMIN, born 1796 at Mattaigne (Belgium, at that time a department of the Ardennes), died 1865 at Rodez. Left dependent on his own resources at twenty, he commenced life with the study of natural science. In 1821 he established, in conjunction with BAZARD and Flottard, the society of the CARBONARI (*q.v.*) in France. Devoting himself to the service of this secret society with the fury of youth, he barely escaped, 1822, being sentenced to death. Altering then the scope of his operations, he worked after the death of St. SIMON, whom he never had known, on the *Producteur* (1825-26). About this date he began to be detached from the followers of St. Simon, with whom, however, he did not definitely part company till 1829. He then published several works on medical science, and, during the revolution of 1830 attended, with great courage, the wounded under fire. Taking his pen up again, he published his *Introduction à la Science de l'Histoire* (1833, reprinted 1842), and afterwards, in conjunction with Roux Lavergne, the work by which he is best known (*Histoire parlementaire de la Révolution Française*, 1833-38, 40 vols., reprinted—the first seven alone 1846). In this work, without approving the violence and bloodshed, he rehabilitated the principal personages of the first revolution. This was followed by his *Essai d'un traité complet de Philosophie au point de vue du Catholicisme et du Progrès* (1838-40, 3 vols.), in which he sought, in harmony with his St. Simonian views, to reconcile philosophy with Catholicism. He had founded (May 1847 to July 1848) the *Revue Nationale* when the Revolution of 1848 broke out. Appointed *Maire-adjoint* of Paris, he took great part in the suppression of the disturbances in the streets, particularly of the socialist manifestation of 16th April. Elected by 135,000 votes a representative of the people, he was chosen, 4th May, president, on the opening of the *Assemblée Constituante*, and was in the chair, 15th May, when the chamber was invaded by the revolutionary socialists. The firmness and dignity of his conduct brought him respect from all. He continued actively to fulfil the duties of his post, but was not elected a member of the *Assemblée Législative*. He was arrested at the *Coup d'état*, December 1851, but was soon set at liberty, and occupied himself in writing, 1856, the *Histoire de la formation de la Nationalité Française*, 2 vols. in 32mo, reprinted 1859 under the title of *Les Mérovingiens et les Carlovingiens*. He was the first to speak in France in favour of *Associations Ouvrières*, which he desired to establish under a form approaching that of a religious order, not only to secure propriety of conduct, but perpetuity and increase of capital. His disciples and friends MM. L. Cerise and A. Ott published, in 1866, after his death, a posthumous work, *Traité de Politique et de Science Sociale*, preceded by a notice of his life and works by M. A. Ott. A. C. f.

BUCKLE, THOMAS HENRY, born 1821, led a student's recluse life, devoted to the great historic work which he left unfinished on his death in his forty-first year (1862). In the introduction to this work, the principle that human actions obey laws verifiable by statistics, was, as Mill says (*Logic*, bk. v. ch. ii. § 1), "most clearly and triumphantly brought out" by Buckle. MILL does not however agree

in the opinion that the moral qualities of mankind are little capable of being improved, and conduce little to the progress of society (*Ib.* § 2). Dr. Venn has protested more strongly against Buckle's fatalistic interpretation of statistics (*Logic of Chance*, 2d ed. pp. 235-241). An erroneous impression of the futility of human effort is conveyed by such statements as "suicide is merely a product of the general condition of society, and the individual felon only carries into effect what is a necessary consequence of preceding circumstances" (Venn, *Logic of Chance*, 2d ed. ch. xviii. § 14; Buckle, *History of Civilisation*, vol. i. ch. i.) The same disposition to underrate the force of human will appears in Buckle's theories as to the influence of physical conditions on wages and population: "There is a strong and constant tendency in hot countries for wages to be low, in cold countries for them to be high. The evil condition of Ireland was the natural result of cheap and abundant food" (*History of Civilisation*, ch. ii.) He here maintains that "potato philosophy of wages," which Prof. WALKER stigmatised (*Pol. Econ.*, bk. v. ch. iii.) Buckle's economical reflections are indeed not always sound, but they bear the impress of originality, enhanced by copious learning and recondite references. His account of the discoveries made by political economists is masterly (ch. iv.) The remarks on the leading economists, in particular Adam SMITH and HUME, are instructive, even when disputable. The description of Adam Smith's method as *deductive*, is a half-truth characteristic of Buckle.

History of Civilisation in England, vol. i. 1857, vol. ii. 1861.—New Edition (with index) 1869.—*Miscellaneous and Posthumous Works*, edited by Helen Taylor, 1872; with a biographical notice by the editor. (Among the posthumous works are fragments, some of which relate to economical topics: *e.g. History of Money*, p. 438; *Wages*, p. 459; *Statistics, and Political Economy*, pp. 526, 528). [*Life and Writings*, by A. H. Huth (1880).—*Pilgrim Memories*, by J. S. Glennie, 1875; 2d ed., with a preface, 1880.] F. Y. E.

BUDGET, THE,[1] is the statement of the nation's accounts, drawn up and presented once a year to parliament by the chancellor of the exchequer. In opening his budget, the finance minister first lays before the House the complete accounts of the past financial year, with its actual revenue and expenditure, and the realised surplus or deficiency. For this purpose, and to enable an accurate estimate of the revenue of the coming year to be made, the budget is never, except under peculiar circumstances, taken until a week or two after the close of the financial year, which now runs from 1st April to 31st March.[2] On the other hand, the budget is seldom postponed for more than a short time after that date, so that the period of disturbance to trade, due to the uncertainty of the financial proposals of the year, may be as far as possible curtailed.

The result of the finance of the past year having been stated, the chancellor of the exchequer proceeds to detail the expenditure of the coming year, as estimated by the different departments after review and criticism by cabinet and treasury. These estimates are divided into two parts—the CONSOLIDATED FUND (*q.v.*) and the SUPPLY services.[3]

The amount of the expenditure for the coming year is generally known before the budget is introduced, for the estimates of the supply services have as a rule already been presented to the House; and portions of them, or "votes on account," have probably already been taken.

Against the total of the estimated expenditure ("ordinary" or "extraordinary," the latter term being now usually applied to war expenditure of any kind) it becomes necessary to provide the "ways and means"; and this is the budget proper. The taxation in force during the year just come to a close is almost invariably assumed as the basis of the estimate of the revenue for the coming year, any variations which are likely to ensue being, especially since 1874, taken into account.[4]

On a comparison of the estimated revenue with the estimated expenditure, a surplus or a deficit, as the case may be, appears. Since Peel's time it has been the almost invariable custom, except under great stress of war charge, for the chancellor of the exchequer to take care that, in his final budget estimates of revenue and expenditure, an estimated surplus of three

[1] From the Old French "bougette," diminutive of "boulge," a purse. The term and method of a *Budget* are used in other countries, see R. Stourm, *Cours de Finances: le Budget*, 2d ed., Paris, 1891, 8vo.

[2] The financial year used, till 1832, to run from 1st January to 31st December. The budget is usually taken about the middle of April. In 1860, in consequence of the necessity of an early ratification of the French commercial treaty, the budget was introduced on 10th February. In 1859, in consequence of the change of government, it was not introduced until 18th July. In 1880 there were two budgets, one on 11th March (Northcote's) before the dissolution, the other on 10th June (Gladstone's) after the assembling of the new House.

[3] The CONSOLIDATED FUND—created by Pitt in 1787, for the greater security of the DEBT and other fixed charges, and the more certain maintenance of his SINKING FUND—includes the CIVIL LIST, debt charge, certain pensions, judicial and other salaries, constituting an annual charge fixed by statute, and only to be altered by statute.

The SUPPLY services include the rest of the ordinary expenditure of the country,—the army, the navy, the civil service and the revenue departments, which last include the post office and the cost of the collection of the revenue. These supply services are annually voted item by item in committee (the money being nowadays very strictly "appropriated"), and the amounts can be criticised and reduced, but not increased, by the House. The accounts are subsequently audited, and go before the Public Accounts Committee.

[4] This is almost invariably the case. In 1868 and in 1885, however, the special taxation imposed in the previous year was eliminated from the estimate, and in 1858 Mr. Disraeli took the income tax at 5d. in accordance with the arrangement of 1853, instead of at the 7d. of the previous year.

or four hundred thousand pounds shall be shown. This he does for the twofold object of providing for unforeseen contingencies to expenditure or diminution of revenue; so that, if possible, the year shall not end with an addition to the national debt, in other words a deficit, but rather that something shall remain in hand to go towards its further redemption. This policy has become especially essential since 1874, in which year the system of close estimates was finally adopted; for under the old system, in which practically no account was taken of the normal annual increase of revenue, a surplus was ready to hand if the revenue of the year exceeded that of its predecessor. Unforeseen circumstances may indeed, affect the surplus, but a surplus ought distinctly to be allowed for in the budget—a chancellor of the exchequer, according to Mr. Lowe's definition, being "an animal who ought to have a surplus."

The "ways and means" of the year include the whole of the sources of national revenue, and not only those derived from actual taxation —not only the so-called "tax revenue," but the gross receipts from the business departments (post office, etc.), the net revenue derived from the crown lands, and miscellaneous receipts of different sorts. The continuation of the annual taxes, together with any alteration that may be proposed in them or in the permanent taxes with the view of either distributing the surplus or filling up the deficit, are embodied in resolutions which, in order to obviate possible evasion, are almost always provisionally confirmed on the night of the introduction of the budget.

The resolutions agreed to, they are annually embodied in one bill—the customs and inland revenue bill—which goes through the House of Commons in the ordinary course, and is liable to amendment like any other bill. After passing the Lower House, the bill goes up to the Lords, who can, if they choose, reject, but are precluded from amending it.

The system of including all the WAYS and MEANS proposals of the year in one bill dates from 1861. In the previous year the government had proposed to repeal the paper duty, and this proposal had been embodied in a bill separate from the other budget proposals; and this bill the House of Lords rejected. To prevent the House of Lords from in future discriminating between the different budget proposals, it was decided that in future they should be all included in one bill.

Occasionally—especially under stress of war expenditure—it becomes necessary for the chancellor of the exchequer later in the year to introduce a supplementary budget, and to provide further ways and means to meet additional expenditure. This additional taxation is voted in the same way as the ordinary taxation of the year, though sometimes it is made retrospective, or a double amount is placed on the last half of the year.

During the last twenty years—since the system of more strict appropriation has come into force—supplementary civil service estimates have become a permanent institution, though additional money is seldom or never voted for them, and on balance they are (or ought to be) met by savings on other items of expenditure.

The nature of the sources of "supply" is detailed elsewhere (see TAXATION; CUSTOMS), but the policy that has more or less actuated successive chancellors of exchequer since the first quarter of the 19th century, and its effect on the financial resources of the nation, may be briefly summarised. The modern era of fiscal and financial reform dates from the time of HUSKISSON, mainly between 1824-1828; intermittently followed by his immediate successors, his policy was zealously adopted and carried distinctly further by PEEL between 1842 and 1846. Taken up with vigour by Gladstone in 1853, and, as far as the principle was concerned, finally adopted in 1860, it has since in detail been carried ever farther and farther.

This policy, thus gradually and slowly brought to completion, has been as follows: first, the abolition of all petty, vexatious, and unremunerative duties; secondly, the repeal of all prohibitive, protective, differential, and discriminating duties, and the introduction of perfect equality and unrestricted competition between home, colonial, and foreign goods in regard to the rate of taxation; thirdly, the general reduction of the duties to a minimum, and the choice for taxation of those articles from which the necessary revenue can be raised most evenly, most easily, with the smallest cost and discomfort to the consumer and taxpayer, and in the manner least burdensome to trade. And, in the case of the duties still retained, for the most part to carry out the seeming paradox, as Pitt once called it, "increase by reduction"—to increase the yield of the tax by decreasing the duty, and thus at the same time encouraging consumption and minimising fraud and evasion. In the case, however, of one branch of revenue, that namely derived from intoxicants, these principles only partially prevail; such taxation being governed by politico-moral even more than by fiscal considerations. The practical result of this policy has been to reduce the articles or subdivisions of articles on which import or export duties were charged, from 1046 in 1841 to less than half that number in 1846, to 400 in 1859, and to 143 in 1860. They now number but 47, and even of these only 12 yield an appreciable revenue, the rest being duties retained either in order to countervail excise duties, or levied on articles which bear such a resemblance to those charged with duty that evasion and fraud would take place

if they were not also taxed. Staple articles of commerce such as timber, sugar, cotton-wool, silk, woollen goods, "fancy" goods, corn, and other articles of food, which in early days were either prohibited or heavily charged with duty, now go free. Similarly, a great deliverance has come to many important articles of home production formerly hampered and injured by heavy and vexatious excise duties, such as those on glass, paper, soap, candles, printed calicoes, and cottons. Indeed practically every article of home production is now free except those connected with the manufacture of intoxicants.[1]

No one nowadays would probably venture to assert that the general adoption of free trade in fiscal matters, and the abolition of all small, vexatious, or unremunerative duties has not been of infinite advantage to the country; but it may well be argued that the policy of concentration has been carried somewhat too far in the relinquishment of considerable taxation on articles of general consumption, raised with ease and producing considerable revenue,—such taxes, for instance, as the "nominal" duty on corn abolished in 1869; the duty on sugar abolished in 1874, though the uneconomical reduction of 1873 made final abolition inevitable[2]; and the horse duty abolished in the same year.

But the fact was that these three duties, probably the only duties about which any question of expediency can arise, were relinquished at a time when the expenditure was almost stationary, while the revenue was so buoyant that the difficulty of the chancellor of the exchequer was not, as now, to make both ends meet, but to know what to do "with all the money that persisted in pouring in upon him." Perhaps our chancellors of the exchequer, in the heyday of their financial prosperity between fifteen to twenty years ago, ought to have realised, on the one hand, that the national expenditure would increase and could not be diminished; and, on the other, that the "ravages of temperance" would play havoc with one of the principal branches of the revenue But this they did not foresee, and hence they lightly relinquished the many millions of revenue that the aforementioned three taxes would probably now be producing—taxes, two of which at least could never be with advantage re-imposed.

One chief result of this policy of abolition has been, no doubt, that the income tax, introduced by Peel in 1842 for a temporary purpose, and now finally a permanent tax, is ever more and more looked to as a source of revenue to make up a deficiency. But, after all, the Income Tax has the advantage of being a direct tax, and the additional advantage of being more or less a tax on wealth. Moreover, in consequence of the relinquishment of so many indirect taxes (to the advantage of trade and the taxpayer), though the total gross receipt from the income tax stands at a figure which would have astounded our fathers, the pressure on each individual taxpayer is less than in the old days.

A word or two may be said in reference to the most famous of English budgets of the last hundred years. Pitt's great budget of 1798, wherein he unfolded his scheme for financing the life and death struggle with France, is memorable for the first imposition of the income tax, and the Huskisson-Robinson budgets of 1823-26, for the first beginning of fiscal reform. Althorp's first budget, that of 1831, was remarkable in that it attempted so much and accomplished so little. The Whigs in their abortive budget of 1841—the first budget professedly based on free-trade principles—proposed, in addition to dealing with the corn laws, greatly to reduce the protective and differential duties on the two most important articles of general consumption—sugar and timber. Then followed Peel's budgets,[3] each more progressive than its predecessor. Beginning with that of 1842, which involved the re-imposition of the income tax (swept away in 1816), and ending with that of 1846, the proposals they contained, together with the repeal of the corn laws, made the practical adoption of free trade only a question of years.

The Whig budget of 1851, like Althorp's of twenty years before, and that of Lowe twenty years later, is chiefly remembered for its failures. In that year the House, for the first time since the re-imposition of the income tax, refused to renew it for a term of years, and voted it for a single year only; a precedent which (except during the Crimean War) has ever since been followed.

The free-trade budget of December 1852—

[1] In 1840, according to the Report of the celebrated Import Duties Committee, import customs duties were, in 1838, charged on 868 articles (exclusive of subheads), the yield from which could be divided as follows:—

17	articles produced	95	per cent	. .	£21,700,000
29	,, ,,	4	,,	. .	899,000
144	,, ,,	1	,,	. .	363,000
531	,, ,,	..	,,	. .	80,000
					£23,042,000
147	,, loss, deduct	. .	. .	. .	5,000
868					£23,037,000

In 1888.

3	articles produced	90	per cent	. .	£18,100,000
3	,, ,,	9	,,	. .	1,800,000
47	,, ,,	1	,,	. .	200,000
53					£20,100,000

The 47 are principally nominal.

[2] The duties on sugar were reduced in 1873 to the moiety of what they had been in 1870. In that year also there had been a reduction, so that they were in 1870 but the quarter, speaking generally, of what they stood at in 1867.

[3] As a matter of fact, Goulburn was chancellor of the exchequer, but the budgets were those of Peel; and he himself (as prime minister) introduced those of 1842 and 1845, as well as the bill for the repeal of the corn laws in 1846.

brought forward by Mr. Disraeli as chancellor of the exchequer in Lord Derby's protectionist ministry—marked the total collapse of the protectionist party, while it brought about the defeat and resignation of the Government. The following year saw Mr. Gladstone's famous budget of 1853 which, together with those of 1842-46, and that of 1860, formed a series of fiscal measures which resulted in the complete emancipation of trade from prohibitive, protective, and differential duties. The budget of 1853 dealt also with the income tax, the chancellor of the exchequer proposing gradually to extinguish it in seven years. The Crimean War frustrated the plan; and the income tax also surviving the subsequent attempts to extinguish it, made by the same hand, under the scheme of 1864 and again in 1874, is now unquestionably a permanent institution. The budget of 1860—also Mr. Gladstone's—was additionally marked by the fact that it was contingent on the negotiation of the French commercial treaty, a treaty which was adopted, and, to the great benefit of England and France, remained in force for twenty years. The budget of 1860 was followed by a succession of Gladstonian budgets, marked by much financial ability. Mr. Lowe's budgets of 1869-73 were chiefly remarkable for the extraordinary leaps and bounds of the revenue, which enabled him greatly to reduce taxation, as well as considerably to reduce the national debt. The budget of 1874—the "six millions surplus" budget—was not so far-reaching or satisfactory as it probably would have been if the chancellor of the exchequer, Sir Stafford Northcote, could have had a longer time in which to consider and develop his financial schemes. Sir Stafford Northcote's three last budgets, 1878-80, were chiefly memorable from the fact that no real effort was made to provide a surplus of revenue over expenditure.

The budget of 1880 (Mr. Gladstone again) was marked by the commutation of the malt tax into a beer duty. Under that of 1883 (Mr. Childers) an arrangement was made for preventing any break or diminution in the annual sum applied to the redemption of the debt, by replacing on a sound and satisfactory basis the large amount of Terminable Annuities that otherwise would have lapsed in 1885. Under this scheme, without any addition to the debt charge, some 123 millions of debt were to be redeemed in twenty years. The Liberal budget of 1885, under which it was proposed to meet a deficit of 14 millions by the imposition of 7 millions of additional taxation and the temporary suspension of the sinking fund, was rejected; and, for the second time in the century, a defeat on a budget was followed by the resignation of the Government. The year 1888 was noticeable for the reduction of all the 3 per cent stocks to $2\frac{3}{4}$ per cent, a rate which was to fall to $2\frac{1}{2}$ per cent in fourteen years (see Conversion of British National Debt). The most important budgets of the last 150 years are those of 1798, 1842, 1846, 1853, 1860, and 1911. By Mr. Lloyd George's budget of 1910-1911, the Death Duties (*q.v.*), first imposed by Mr. Gladstone in 1853, were heavily increased, and, by means of a valuation of the land throughout the country, a foundation was attempted to be laid on which increment arising from any increase in its value should be taxed. This source of revenue has, however, up to the present proved unremunerative. The observation of J. S. Mill was not borne in mind that the market value of land at the time should be offered to existing owners to obviate injustice.

[The authorities—historical, fiscal and financial—that could be quoted are innumerable. Financial works—Dowell, *History of Taxes and Taxation.*—M'Culloch, writings.—Porter, *Progress of the Nation.*—Levi, *History of Commerce.*—Tayler, *History of Taxation.*—Northcote, *Twenty Years' Financial Policy.*—Buxton, *Finance and Politics, an Historical Study, 1786-1885.* Also the speeches of the chancellors of the exchequer (Hansard); parliamentary blue-books, reports of committees and commissions, the annual "finance accounts" and "statistical abstracts"; the large blue-book published in 1868, *Public Income and Expenditure Return*; *Report of the Import Duties Committee of 1840.*—See also Bernard Mallet, *British Budgets, 1887-88 to 1912-13*, London, 1913.] S. C. B.

BUILDING SOCIETIES.* Building societies are societies formed "for the purpose of raising by the subscription of the members a stock or fund for making advances to members out of the funds of the society, upon security of freehold, copyhold, or leasehold estate by way of mortgage" (37 & 38 Vict. c. 42, § 13). Societies of this nature existed for some time before they became the subject of legislation. "There were certain persons who had saved or were saving money and were desirous of investing it at a higher rate of interest than the usury laws enabled them to obtain at the time, and other persons who were desirous of either building or buying houses for their own habitation. These two classes came together: the persons who had saved money or were saving money paid it into the society, and it was lent to persons who were desirous of building or buying houses on the security of the houses, and on terms which compelled the borrowers to pay a larger sum by way of interest than 5 per cent per annum . . . Under these circumstances the act 6 & 7 William IV. c. 32, for the regulation of building societies, was passed" (Sir George Jessel, *in re* Guardian Benefit Building Society, *Law Reports*, 23 Ch. Div. p. 457). The Act of William IV. provided for the registration of building societies and gave them certain privileges, but the liability of the members remained unlimited, and no corporate rights were given to such societies (whose

property was therefore required to be vested in trustees, a circumstance causing much practical inconvenience). The act of William IV. was repealed by the Building Societies Act, 1874 (37 & 38 Vict c. 42), which, together with several amending acts, now regulates the law on the subject. There are *terminating* and *permanent* building societies, the latter being of more recent growth than the former. A *terminating* society is one which by its rules is to terminate at a fixed date, or when a result specified in the same is attained; while a *permanent* society is one which has not, by its rules, any such fixed date or specified result at which it shall terminate. The amount of the shares in either case is raised by periodical (generally by monthly) subscriptions; any member may, on the security of freehold, copyhold, or leasehold property, obtain loans from the society, in which case the amount of the subscriptions is raised so as to provide for interest and repayment of capital. It is a common practice for persons to become members for the sole purpose of borrowing. The liability of investing members is limited to the amount actually paid, or in arrear, on their respective shares, while the liability of borrowing members extends to the total amount of the subscriptions payable by them under the particular mortgage deed, or under the rules of the society. Members may generally withdraw their shares on terms specified in the rules. The societies called *Bowkett* societies are terminating societies, making advances to their members which are repayable within a fixed time without any interest. The rotation of the members is determined by ballot. It is obvious that this system gives an undue advantage to those members who obtain advances in an early stage of the society's progress, and this inequality has been modified by the *Starr-Bowkett* societies. Every building society is regulated by rules which must contain certain particulars enumerated in the act of 1874. These rules must be examined by the registrar of friendly societies, who, after being satisfied that they are in accordance with the requirements of the law, grants a certificate of incorporation. The act authorises building societies to take deposits and generally to obtain loans within certain limits, it requires that every deposit-book or acknowledgment, or security of any kind given for a deposit, or a loan by a society, shall have printed or written therein or thereon the sections of the act relating to the liability of the members, and the regulation of the borrowing powers. Building societies may hold land as far as it is necessary for their purposes; summary remedies in the county court are given against defaulting officers, and there are special facilities offered for the criminal prosecution of persons defrauding such societies. On the repayment of a loan by a member no formal reconveyance of the mortgaged property is necessary. Building societies are, when necessary, wound up by the county court of the district in a manner similar to that directed by the Companies Acts for joint-stock COMPANIES. Building societies registered under the act of 1836 were authorised to take out certificates of incorporation under the new act, and most of them have availed themselves of this privilege, but some unincorporated societies are still in existence. Besides these there are also co-operative building societies, which are not essentially different from other co-operative societies. The difference between building societies and joint-stock companies is pointed out in a very lucid manner by the royal commissioners (whose report, published in 1872, preceded the passing of the act of 1874). They point out that, while in a joint-stock company the leading idea is *capital, membership* is the essential principle of a building society. "In the building society the capital is never fixed. The number of shares is always indefinite, and the share has no permanence. The capital is constantly increasing by the addition of new shares, or decreasing by the withdrawal of existing ones. . . . Its membership remaining always open, it knows no share jobbing, fattens no brokers, and needs no settling day on the Stock Exchange. . . . The two forms of undertaking, we venture therefore to think, have an equal right to subsist, the one for the use of them who seek to make capital, the others for those who, having made it, seek to use it." The antithesis of the last sentence is not quite accurate from the economical point of view; it might be more correct to say that the building society gives an opportunity to invest savings which are gradually accumulating, while the joint-stock company as a general rule does not offer the same facilities for that purpose; but the main point is that the building societies absorb the savings of a class of investors who, as a rule, could not invest in the shares of joint-stock companies. It is right that societies established for this purpose should enjoy certain facilities not accorded to ordinary joint-stock companies, but special care should be taken, on the other hand, that the funds so provided should be managed by competent, prudent, and honest persons, and that the safety of the capital should be considered of greater importance than a high return of interest. Recent judicial decisions have established the principle that the directors of building societies have, in the absence of any special rules, the same freedom of action as the directors of financial companies. This principle, though it may be in accordance with the words of the statute, does not harmonise with the ideas expressed by the commissioners, which the Building Societies Act was intended to

embody, and the interference of the legislature would be clearly desirable. The following figures illustrate the growth of building societies. Those of 1870 are derived from the commissioners' second report, and are partly based on estimate; later figures are from the annual reports by the chief registrar of friendly societies (building societies). Some societies do not make returns, or only return certain items. The number of these is added in square brackets:

		No. of Societies.	Members.	Annual Receipts.
England .	1883	2444	582,866 [1940]	£19,480,489 [2146]
England and Wales	1908	1691	581,026 [1665]	39,898,872 [1665]
	1912	1503	573,212 [1474]	21,407,405 [1474]
Scotland	1870	88	20,635	1,000,000
	1888	50	8,968 [37]	403,617 [44]
	1908	138	30,970 [132]	681,292 [132]
	1912	119	27,814 [114]	617,062 [114]
Ireland	1870	17	3,836	no estimate
	1888	51	12,310 [44]	531,751 [44]
	1908	90	10,618 [67]	445,084 [67]
	1912	81	8,908 [49]	330,769 [49]

		Due to Investing Members.	Liabilities on Loans and Deposits.	Total Assets.
Eng.	1870	£9,000,000	£6,000,000	£17,000,000
	1888	34,705,963 [2157]	14,734,511 [2157]	51,218,823 [2157]
	1908[1]	42,154,539 [1665]	24,929,500 [1665]	70,957,594 [1665]
	1912[1]	43,073,924	15,464,309	62,126,159
Scot.	1870	823,282	474,916	1,500,000
	1888	729,970 [45]	242,198 [45]	1,011,961 [45]
	1908[1]	1,430,092 [132]	377,584 [132]	1,933,374 [132]
	1912[1]	1,429,763	399,183	1,962,133
Irel.	1870	419,984	147,189	no estimate
	1888	680,816 [4]	248,314 [4]	991,514 [4]
	1908[1]	764,775 [67]	275,206 [67]	1,150,973 [67]
	1912[1]	581,575	212,254	883,499

[1] 1908 and 1912, holders of shares. 1912, number of societies making returns: England, 1474; Scotland, 114; Ireland, 49.

Number of Societies whose returns show amounts exceeding £100,000 under any of the heads named [England and Wales].

	Annual Receipts.	Due to Investing Members.	Liabilities on Loans and Deposits.	Total Assets.
1870	10	8	8	13
1888	26	44	17	64
1908	33	64	24	94

It will be seen that in England the number of members has decreased, as also the number of societies, while the business done has increased. The figures seem to point to the fact that a much wealthier class of shareholders has come in since the passing of the act. In Scotland the figures have followed the same variations. In Ireland the progress is by no means uniform. The act of 1894 required all the societies established after 1856 to be incorporated under the act of 1874. E. S.

BÜLAU, FRIEDRICH VON (1805-1859), a German economist of note, was born at Freiberg; he studied at Leipsic, where he became, in 1833, professor of philosophy, and in 1840 of political science, filling the latter chair till his death. He held from 1837 the censorship of the periodical press. He took a prominent part in the propagation of the doctrines of ADAM SMITH in Germany. His principal economic writings are —*Encyclopedie der Staatswissenschaften*, 1832; *Der Staat und der Landbau*, 1834; *Der Staat und die Industrie*, 1834; *Handbuch der Staatswirthschaftslehre*, 1835; *Die Behörden in Staat und Gemeinde*, 1836. He was a writer of no mean ability, though taking only a second rank among the economists of his time. "He has not," says ROSCHER, "the keen analysis of HERMANN, the learned thoroughness of RAU, nor the exact observation and creative fancy of VON THÜNEN. Even such of his books as were intended as manuals for instruction have the tone of essays or good leading articles; and he devotes himself rather to the discussion of the practical questions of the day than to the examination of fundamental principles." He advocated the most unlimited freedom of the individual in the economic sphere, and insisted that the state must not interfere with competition, or prescribe to citizens the way in which they should pursue their own interest. He thought the most important office of political economy was to reverse the mistaken policy of the past, which impeded the operation of natural laws. He was, in particular, strongly in favour of removing the legal fetters which, in his time, in Germany restricted the alienation of land. (Roscher, *Nat. Ökon. in Deutschland*, p. 902). J. K. I.

BULL. A term usually applied to a buyer on borrowed money. The term on the stock exchange distinguishes the speculator for the rise from the pure investor. The latter buys a stock, pays at the date of settlement; the bull pays a rate of interest in order to "continue" his bargain till the next settlement. "Bull" is the opposite to a "Bear" (see BEAR; CONTINUATION OR CONTANGO.) A. E.

BULL OF BORGIA. A bull issued in 1493 by Pope Alexander VI. professing to grant to the crown of Castile and Aragon all lands discovered, or to be discovered, beyond a line drawn from pole to pole, 100 miles west from the Azores—the crown of Portugal to have all lands eastward of such line. All lands previously occupied by any Christian king were excepted. The object of the bull was to confer a monopoly

of trade with the new world on Spain and Portugal. J. E. C. M.

[For copy of the bull, see *Bullarium Magnum Romanum* (Luxembourg, 1727).]

BULLION. The precious metals GOLD and SILVER (*q.v.*) are generally spoken of as bullion when at or near the standard fineness accepted at the mints of the different countries of the world (see STANDARD). The term is sometimes applied, with some qualifying epithet, to ores containing only a very small portion of the precious metals, which are called "doré bullion" or "base bullion," etc. A statement in the report of Mr. J. P. Turnbull, director of the U.S. mint, on the production of the precious metals in the United States, pp. 14-15 (1887), will explain this. The reference in it is to certain ores found in Mexico more or less argentiferous, the value of which "has been generally estimated in Mexico by the assay of the precious metals, or of silver to the exclusion of the minute proportion of gold" contained in the ore; the base metals not entering into the estimated value. The report then refers to "the small tenor of gold extracted from doré bullion." The metallic compound is then termed "doré bullion" or "base bullion" according to the proportion of the metals of which it is composed—mainly silver or lead, but the term bullion is properly applicable to the precious metals alone (see BILLON).

[See Reports of the Deputy Master of the Mint, London.—Reports of the Director of the Mint, United States, Washington.—Reports on the Production of the Precious Metals in the United States, Washington, etc.]

BULLION COMMITTEE, REPORT OF. The Report of the Select Committee of the House of Commons on the High Price of Gold Bullion, ordered to be printed 8th June 1810, deserves notice from (1) the circumstances which led to the appointment of the committee; (2) the information and opinions expressed in the Report; (3) the controversy which the publication of the Report called forth; and (4) the influence which resulted on the financial policy of the country. (1) The note circulation of the Bank of England had expanded from an average of about 10 to 11 millions in 1795 to nearly 20 millions in 1809. Specie payments having been suspended 1797, and the paper circulation having been increased, the foreign EXCHANGES became unfavourable to this country, and the paper circulation was depreciated in comparison with gold (average depreciation of value of currency 13·5 per cent 1810.—Mushet); gold in bars being at the price of from £4 : 10s. to £4 : 12s. per oz. in the early months of 1810, at that date about 15½ per cent above the mint price of £3 : 17 : 10½ per oz. (2) The Report expressed the opinion that the divergence then observable between the gold and the paper was caused by an over-issue of the latter, and that it was "difficult to resist the inference that a portion at least of the great fall which the exchanges lately suffered must have resulted, not from the state of trade, but from a change in the relative value of our domestic currency." The remedy then suggested was "That the system of the circulating medium of this Country ought to be brought back, with as much speed as is compatible with a wise and necessary caution, to the original principle of Cash payments at the option of the holder of Bank paper." (3) A sharp controversy was excited by these resolutions of the committee. The directors of the Bank of England had stated to the committee "a doctrine, of the truth of which they professed themselves to be most thoroughly convinced, that there can be no possible excess in the issue of Bank of England paper so long as the advances in which it is issued are made upon the principles which at present guide the conduct of the Directors, that is, so long as the discount of mercantile Bills is confined to paper of undoubted solidity, arising out of real commercial transactions, and payable at short and fixed periods" (Report, High Price of Gold Bullion, § 3). The Report of the Bullion Committee was printed 20th June 1810, the day before the prorogation, hence it was not considered till the next session, when it "was made the ground for a set of sixteen resolutions, moved in the House of Commons 6th May 1811, by Mr. HORNER, the chairman of that committee; the last of these resolutions being in pursuance of the recommendation in the Report, to make it imperative on the Bank to resume cash payments at the end of two years. A counter set of resolutions was moved by Mr. VANSITTART; the third of them being the memorable one 'That the promissory notes of the Bank of England have hitherto been and are at this time held to be equivalent to the legal coin of the realm.' The rival resolutions of Mr. Vansittart, including this last, which has been a standing topic of ridicule ever since, were carried on the 9th of May, by a majority of 151 to 75" (Tooke, *History of Prices*, vol. iv. p. 99). The vote on this occasion was doubtless influenced far more by a belief that it was inexpedient to bind the Bank to resume cash payments in so short a period, irrespective of the question whether peace were restored at the end of that time or not, than by any conviction as to the truth of the opinion which Mr. Vansittart maintained, contrary to the evidence given before the committee. (4) The influence of these proceedings on the financial policy of the United Kingdom was considerable, as they had great weight with Sir R. PEEL in 1844, when introducing the Bank Act of that year. He referred to the appointment of this committee in his speech, 6th May 1844, as follows—"In 1810 men of sagacity observed that the exchanges had been, for a considerable

period, unfavourable to this country, more unfavourable than could be accounted for by the balance of trade or the monetary transactions of this country." Sir R. Peel, after defining the pound sterling and the standard, continued his observations on the MEASURE OF VALUE and the coinage, stating "that in using the word money, I mean to designate by that word the coin of the Realm and promissory notes, payable to bearer on demand," adding, "I think experience shows that the paper currency, that is, the promissory notes payable to bearer on demand, stands in a certain relation to the gold coin and the foreign exchange in which other forms of paper credit do not stand. There are striking examples of this adduced in the Report of the Bullion Committee of 1810." Sir R. Peel proceeded to argue, basing his theory on facts shown to exist during a period of suspension of specie payments, contrary, as he admitted, to "the high authority of Adam SMITH and of RICARDO," that "convertibility into coin at the will of the holder" was "not an adequate security against the excessive issue of promissory notes." Hence we may trace the theory on which Sir R. Peel based the act of 1844, to the interpretation he put on the Report of the Bullion Committee (see BANK NOTE; BANK OF ENGLAND; CURRENCY DOCTRINE, etc.)

[Report, together with minutes of evidence and accounts, from the Select Committee on the High Price of Gold Bullion (ordered by the House of Commons to be printed, 8th June 1810). For the history of the controversy mentioned see *The High Price of Bullion a Proof of the Depreciation of Bank Notes*, D. Ricardo, London, 4th ed., 1811, with Appendix, the most complete edition. In this pamphlet Ricardo showed conclusively that the value of the note was depreciated from excess of issue.—*Practical Observations on the Report of the Bullion Committee*, Chas. Bosanquet, London, 1810; the ablest of the pamphlets in opposition to the Report.—*Reply to Mr. Bosanquet's Practical Observations on the Report of the Bullion Committee*, D. Ricardo, London, 1811; a complete answer, based on a knowledge both of the theory and the practice of the subject.—*The Question respecting the Depreciation of the Currency Stated and Examined*, by William Huskisson, M.P., London, 1810, and included in *Private Reprints*, by Lord Overstone, 1857, with other "Select Tracts on Paper Currency."—*History of Prices*, 1792-1856, Tooke and Newmarch, London, *v.d.*, see particularly vols. i. and iv., specially interesting as contemporary history.—*Thoughts and Details on the High and Low Prices of the Thirty Years from 1793 to 1822*, London, Thomas Tooke, 2d ed., 1824; to a great extent incorporated with the preceding, but also interesting.—*A Series of Tables Exhibiting the Gain and Loss to the Fundholder arising from the Fluctuations in the Value of the Currency from 1800 to 1821*, Robert Mushet, London, 1821; the standard work of reference on this subject.]

BUONARROTI, PHILIPPE (1761-1837), communist conspirator and writer, was born at Pisa. He became a student of literature, and was for a time in high favour at the Tuscan court. His enthusiasm for the French Revolution led, however, to his banishment. He retired to Corsica, and served French interests so well there that when he came to France the Convention created him a Frenchman by decree. He associated himself with the Jacobins, and became one of the chief leaders of the conspiracy of BABEUF (*q.v.*). For this he was condemned to transportation, but the sentence was never carried out, and, after imprisonment and detention in several places, he was allowed in 1806 to leave France. He established himself first at Geneva, and afterwards in Belgium, where he supported himself by composing and teaching music. In 1828 he published at Brussels his *Conspiration pour l'égalité dite de Babeuf, suivie du procès auquel elle donna lieu et des pièces justificatives, etc.*, which contains the most complete scheme for the actual establishment of communism, as distinguished from the description of a mere ideal state, that has ever been put forward. The author ascribes the whole scheme to Babeuf, but there can be little doubt that this is to a great extent a literary fiction, and that the scheme is mostly his own (see COMMUNISM). He returned to Paris in 1830.

A letter from him to J. Bronterre O'Brien comparing the schemes of Babeuf and Owen is quoted in Holyoake's *History of Co-operation*, vol. i. p. 258. A translation of his *Conspiration* was published by O'Brien in 1836, and had some circulation among the Chartists (Holyoake, *Hist. of Co-operation*, vol. i. p. 44). E. C.

BUQUOY, GEORG FRANZ, Count, was born at Brussels 1781, and died at Prague 1851. Proficient in several sciences, Buquoy endeavoured to apply mathematics to political economy in his—

Theorie der Nationalwirthschaft, 1815; supplemented by *Das national-wirthshaftliche Princip*, 1816.—*Erläuterung einiger eignen Ansichten*, 1817.—*Begründung des Begriffs von reellem Werth*, 1819.—(The author's ethical and political principles are set forth in *Skizze*, 1819.—His views on currency, in *Ein auf echten Nationalcredit fundirtes Geld*, 1819).—See Wurzbach, *Biographisches Lexicon des Kaiserthums Österreichs*. F. Y. E.

BUREAU OF LABOUR. In large industrial communities the establishment of a department of government dealing specially with the numbers, movements, and condition of the working classes has been recommended for two reasons: (1) in the interest of the state itself, to furnish information which may guide the legislature; (2) in the direct interest of the working classes, that employers and employed may be brought together, and workers may go where they are most wanted and best paid (see BOURSE DU TRAVAIL). The existing bureaux

confine themselves to the first object. The second seems better secured by well-organised trades societies than by a bureau of labour, which might be used against them in labour disputes. Even a purely statistical bureau, if its figures are to be full and trustworthy, must be above suspicion of collusion with employers; and this requisite seems best fulfilled by the appointment of a representative of the working classes on the staff of officials. England since 1886 has had a "labour correspondent," under the board of trade; and a recent holder of the office was a well-known trades unionist. Switzerland has not only a bureau of labour, but a labour secretary of state, in close connection with the trades societies of the republic. Germany has no separate labour bureau, but the collection of labour statistics is carried on by the general statistical bureau with great carefulness, in view of the administration of the workmen's insurance acts. The experiment is being tried on a large scale in the United States (see below), where there is a national bureau at Washington (established 1884), and more than twenty of the states have also established bureaux, the earliest being Massachusetts (1869) and Pennsylvania (1872). The formation of an International Bureau of Labour was suggested in connection with the Labour Conference held at Berlin in March 1890; but the project remains as yet unrealised. For recent developments see LABOUR EXCHANGES, App. Vol. II., and UNEMPLOYED, App. Vol. III.

[See Report, Board of Trade, *Relation of Wages in certain Industries to the Cost of Production* (T. H. Elliott), 1891.] J. B.

BUREAU OF LABOUR IN THE UNITED STATES.* *History.*—In 1869 the state of Massachusetts established a bureau of statistics of labour. In 1872 Pennsylvania organised a bureau of industrial statistics. Neither of them seems to have been owing to any demand on the part of labour organisation. But after the great railroad strikes of 1877, bureaus were established in rapid succession in Ohio (1877), in New Jersey (1878), in Illinois, Indiana, and Missouri (1879). A little later the powerful organisation known as the KNIGHTS OF LABOUR made the establishment of such bureaus one of their "demands," and they were organised in New York, California, Michigan, and Wisconsin (1883); Iowa and Maryland (1884); Kansas and Connecticut (1885); Maine, Minnesota, Colorado, North Carolina, Rhode Island, and Nebraska (1887). A national bureau of labour was established 18th January 1885, which became the department of labour in 1887. Its head (commissioner of labour) is not, however, a cabinet officer.

The main *object* of all these bureaux is to investigate the condition of the labouring class. The Massachusetts statute, which has been followed in most of the other states, reads as follows:

"The bureau shall collect, assort, arrange, and present in annual reports . . . statistical details relating to all departments of labour in the Commonwealth, especially in relation to the commercial, industrial, social, educational, and sanitary condition of the labouring classes," etc.

In many of the states (*e.g.* N.J., Penn., Ind., Ill., Wis., Ia., Kan., and Neb.) the bureau is also a bureau of industrial statistics, and is expected to collect and publish information relating to the chief industries of the state.

In Wisconsin and Missouri the commissioner of labour is also the chief factory inspector, and in Illinois the board of labour commissioners appoint the inspectors of mines.

The *financial resources* of most of the bureaus are extremely meagre; the officers consist of a chief and one or two clerks; and only a few hundred, or at most a few thousand, dollars are allowed for the work of gathering statistics.

The *legal powers* are not extensive; for although in many states penalties are prescribed for refusal to give the information demanded by the bureau, yet these penalties are seldom enforced. Most of the bureaus simply send out circular schedules to employers of labour, a large proportion of which are never answered.

The *scientific value* of the reports of the state bureaus is very unequal. Those of Massachusetts (twenty-three in number) form an extremely valuable series, and contain the best information we possess in regard to the condition of American labour. The New Jersey and Illinois reports also contain valuable information. The others are of little consequence.

The national bureau (department) of labour is better equipped than any of the state bureaus. It undertakes special investigations and has published reports on The Depression of Trade (1886); Strikes and Lockouts (1887); Convict Labour (1888); Marriage and Divorce (1889); Working-women in Great Cities (1889); Cost of Production (1890); and Condition of Railroad employés (1890).

[Reports of the various bureaus (generally annual, in some cases biennial).—Proceedings of convention of the chiefs of labour bureaus (annually since 1883) —*Political Science Quarterly*, vol. i. 1886, pp. 45 *seq.* and 438 *seq.*] R. M.-S.

BUREAUCRACY. The administration of many branches of business, public and private, by functionaries centralised in *bureaux* (whence the name is derived), is the rule in most of the important countries of Europe. It is less the case in Great Britain and Ireland than on the continent,—but the complex character of the requirements of modern life, and especially the aggregation of large masses of the population in cities, have called, in recent times, for increased superintendence in matters of health, police, education, etc. W. BAGEHOT, in his work on *The English Constitution*, describes the advan-

tages and the defects of a highly organised bureaucracy very clearly. The necessity for organisation requires no explanation—on the other hand, as Bagehot remarks, the defects of bureaucracy are well known: "It is an inevitable defect, that bureaucrats will care more for routine than for results; or, as Burke put it, that they will think the substance of business not to be much more important than the forms of it." Their whole education and all the habit of their lives make them do so. Men so trained must come to think the routine of business not a means but an end; to imagine the elaborate machinery of which they form a part, and from which they derive their dignity, to be a grand and achieved result, not a working and changeable instrument.

An over-organised "bureaucracy tends to under-government, in point of quality; it tends to over-government in point of quantity." The risk is that it comes to be considered that "the functionaries are not there for the benefit of the people, but the people for the benefit of the functionaries." Yet, though this risk is well known—the weakness of separate individuals when dealing with the organised forces of powerful companies and corporations, has been felt to be so dangerous and the necessity for providing for the health, the protection, and the instruction of the masses, the feeble, and the young, to be so great, that the tendency of the day is towards increasing the power of official superintendence and inspection. In the words of JEVONS (*The State in Relation to Labour*, p. 166), "there can be no royal road to legislation in such matters. We must consent to advance cautiously step by step, feeling our way, adopting no foregone conclusions, trusting no single science, expecting no infallible guide. We must neither maximise the functions of government at the back of quasi-military officials, nor minimise them according to the theories of the very best philosophers. We must learn to judge each case upon its merits, interpreting with painful care all experience which can be brought to bear upon the matter." The gradual growth of this opinion is characteristic of modern thought. H. Sidgwick (bk. iii. of his *Principles of Political Economy*, ch. ii. "The system of Natural Liberty considered in relation to Production"), while weighing carefully the advantages and disadvantages of governmental interference, observes "first, that these disadvantages are largely such as moral and political progress may be expected to diminish; so that even where we do not regard the intervention of government as at present desirable, we may yet look forward to it, and perhaps prepare the way for it. And, secondly, even where we reject governmental interference, we may yet recognise the expediency of supplementing or limiting in some way or other the results of private enterprise." Again, on the cognate subject of LAISSEZ-FAIRE, we find CAIRNES in his essay on "Political Economy and Laissez-faire," *Essays in Political Economy, Theoretical and Applied*, saying, "the maxim of *laissez-faire* has no scientific basis whatever, but is at best a handy rule of practice, useful perhaps as a reminder to statesmen on which side the presumption lies in questions of industrial legislation, but totally destitute of all scientific authority." Compare with this the sterner teaching of J. S. MILL (*Principles of Political Economy*, bk. v. ch. xi., "Limits of the Province of Government")—"Even if the government could comprehend within itself, in each department, all the more eminent intellectual capacity and active talent of the nation, it would not be the less desirable that the conduct of a large portion of the affairs of society should be left in the hands of the persons immediately interested in them. The business of life is an essential part of the practical education of a people, without which book and school instruction, though more necessary and salutary, does not suffice to qualify them for conduct, and for the adaptation of means to ends" (see LAISSEZ-FAIRE).

BURET, ANTOINE EUGÈNE, born at Troyes 1810, died at Paris 1842. He wrote in the *Courrier français*, and the *Journal des économistes*. But what, during his short career, won for him chiefly the esteem of the economic world, is, notwithstanding the manifest tendencies the book contains towards the opinions of the then rising socialist school, his work, *De la Misère des classes laborieuses en Angleterre et en France* (2 vols. in 8vo). This book is the expansion of an essay which obtained for the author the sum of £100—the half of the quinquennial prize (Félix de Beaujour), in 1840 awarded by the *Académie des Sciences morales et politiques*; it is written with vigour, and in a conscientious spirit, and is attractive to read, though the author, by representing exceptional cases as the general rule, has drawn too gloomy a picture. Buret also revised, in conjunction with J. A. BLANQUI, the translation of Smith's *Wealth of Nations* by G. GARNIER, in the "Collection Guillaumin." A. C. f

BURGH, a word used in Scotland for the same purposes as the word BOROUGH (*q.v.*) in England. E. S.

BURGHER. See CITIZEN.

BURIDAN, JEAN, rector of the university of Paris in 1327, alive in 1358, a celebrated philosopher, discusses the "commutation of moneys" and interest in his—

Quæstiones super decem libros ethicorum Aristotelis. F. Y. E.

BURKE, EDMUND, born 1728 or 1729, died 1797. A rich vein of economic wisdom, mixed with other precious materials, runs through the whole vast tract of Burke's political writings. The mine is deepest, or

at least the ore purest, in the *Thoughts on Scarcity*, dated 1795. Here Burke enunciates general principles worthy of the *Wealth of Nations*, though perhaps not derived from that source, if it be true, as Prior relates, that Adam Smith described Burke as "the only man he had met with who thought as he did on the chief topics of political economy without previous communication." Burke says, "Labour is a commodity like every other, and rises or falls according to the demand." The rate of wages thus determined "has no *direct* relation" to the price of provisions. "The balance between consumption and production makes price. The market settles, and alone can settle, that price. . . . Nobody, I believe, has observed with any reflection what market is without being astonished at the truth, the correctness, the celerity, the general equity, with which the balance of wants is settled." Burke extols "the laws of commerce which are the laws of nature, and consequently the laws of God." He condemns the "political canting language" of those who speak compassionately of the "labouring poor." Similar reflections occur in the third letter on a *Regicide Peace*. There Burke says "to force any market is of all things the most dangerous." And again, "the love of lucre is the grand cause of prosperity to all states." Just views as to the nature of foreign trade are to be found in several places. *Two Letters to Gentlemen in the City of Bristol* denounce the restrictions on Irish trade. In a letter on a proposed Irish Absentee Tax, Burke says, "No man living loves restrictive regulations of any kind less than I; at best, nine times in ten, they are little better than laborious and vexatious follies." The fallacies of the mercantile theory did not ensnare Burke. "To state the whole of the foreign import as loss is exceedingly absurd." Wealth "consists in the stock of useful commodities as much as in gold and silver" (*Observations on a Late State of the Nation*). However, Burke seems not altogether to disapprove of the laws restricting the commerce of America. "I am sure they are still, in many ways, of great use to us; and in former times they have been of the greatest" (*Speech on Conciliation with America*). Indeed he appears to treat the Balance of Trade as not absurd (Third Letter on a *Regicide Peace*). He is no bigoted preacher of *laissez-faire*. He says:—"It is one of the finest problems in legislation . . . what the state ought to take upon itself to direct by the public wisdom, and what it ought to leave, with as little interference as possible to individual discretion. Nothing, certainly, can be laid down on the subject that will not admit of exceptions, many permanent, some occasional" (*Thoughts on Scarcity*). In fine, Burke never forgets that wealth is but one element of well-being, and not to be separated from "the great contexture of the mysterious whole."

The *Thoughts and Details on Scarcity* were published posthumously in 1800, with an interesting preface by the editors. The groundwork of the *Thoughts and Details* consists of a memorial addressed to Pitt in 1795; with which the editors in 1800 have incorporated fragments of a letter addressed to Arthur Young concerning "rural economics." The *Thoughts and Details* are to be found, along with the other writings referred to above, in the collective editions of Burke's works; of which there are several, the best perhaps being that of 1852, "Works and Correspondence" in eight volumes. F. Y. E.

BURLAMAQUI, Jean Jacques (*b.* 1694, *d.* 1748), professor of law at Geneva, has some striking remarks about the dependence of price on rarity and utility in his *Élémens du droit Naturel*, 1775 (part iii. ch. xi.) The substance of this work appeared in another form under the title *Principes du droit de la Nature et des Gens*, with matter added by the editor, Prof. de Felice, 1766; new edition, 1820. The remarks of Burlamaqui on value have been quoted by Walras, *Éléments de l'Économie Politique*, 2d éd. Leçon xvi. F. Y. E.

BURTON, J. HILL. See Hill Burton, J.

BÜSCH, Johann Georg (1728-1800), was, as Roscher says, the best representative of liberal tendencies among the German eclectic economists in the last thirty years of the 18th century. Materials for the history of his life are supplied by his autobiography (*Ueber den Gang meines Geistes und meiner Thätigkeit*). He was born in the territory of Lüneburg, and accompanied his father in 1731 to Hamburg, where he resided, except during his student-years at Göttingen and occasional absences, till his death. He is described as an excellent man, disinterested, independent, frank, modest, and industrious, and a good citizen, devoted to the interests of his adopted city. He was professor of mathematics in the local gymnasium, and conducted a trade academy at Hamburg which celebrated its centenary in 1867. He had a very high reputation in Germany; Lüder speaks of him as "our greatest political writer," but this is a somewhat exaggerated estimate. Roscher characterises him as "a cultivated, experienced, and right-minded man, disinclined to all doctrinaire one-sidedness and practical extravagance." He is an original writer, but has not the art of orderly arrangement and clear exposition. His views were formed rather by experience and observation than by the study of books. The economic theorist whom he most valued was Steuart; he shows a certain captiousness and even bitterness towards Adam Smith, whom he considered to be popularly over-rated. He is, however, more favourable to Free Trade than most of his German predecessors, and protests against the "hot-bed cultivation" of certain branches of production at the

cost of the community. He unfortunately fell into the mistake (indicated by the title of his principal work, *Abhandlung von Geldumlauf*, 1780) of regarding economic phenomena with reference not to wants and their satisfaction, but to the circulation of money, a view which dominates the whole circle of his ideas. This confuses much of his reasoning, obscures the deeper and more essential facts of economic life, and tends to lead him back into the errors of mercantilism, from which, accordingly, he is only partially free. His most permanently valuable writings are probably his treatise on universal commerce (*Entwurf einer Geschichte der merkwürdigsten Welthändel neuerer Zeit*, 1781) and his history of the trade of Hamburg (*Gesch. der Hamburgischen Handlung*, 1797), in which he shows a thorough familiarity with the course of trade and the commercial relations of different countries (Roscher, *Gesch. der Nat. Oek. in Deutschland*, p. 559). J. K. I.

BÜSCHING, ANTON FRIEDRICH (1724-1793), was one of the two most distinguished German statisticians of the 18th century, ACHENWALL being the other. Like the latter, he belongs, as regards his economic opinions, to the more liberal branch of the mercantilist school. The work on which his reputation chiefly rests is his *Vorbereitung zur Europäischen Länder- und Staatskunde*, 1759. He rendered an important service by initiating in his *Neue Erdbeschreibung* the new "politico-statistical" method in geography, which supplies full information on the natural resources and capabilities, the industry and trade, the political system and general culture of each of the countries described. J. K. I.

BUTEL-DUMONT, GEORGE MARIE, was born at Paris in 1725, and died towards the end of the 18th century. By profession he was an advocate, and was appointed secretary to the French embassy at St. Petersburg. His works are chiefly concerned with colonial and commercial history. He is said to have assisted GOURNAY in translating CHILD'S *New Discourse of Trade* (1754). He translated and enlarged the *Discourse on Trade* of John CARY (*Essai sur l'État du Commerce d'Angleterre*, 2 vols. 1755). The best known of his works is the *Théorie du Luxe, ou traité dans lequel on entreprend d'établir que le Luxe est un ressort non-seulement utile, mais même indispensablement nécessaire à la prospérité des États*, two parts, 1771. This does not, however, merit the praise sometimes bestowed upon it; it is a superficial apology for luxury without any originality, attacking the "Tableau hiéroglyphique" of the economists, and their theory of the detrimental influence of luxury (pt. ii. p. 36), ridiculing the definite sense they give to it, though confessing their merits in other respects (p. 39).

His other works are: *Mémoires historiques sur la Louisiane*, 1753.—*Histoire et Commerce des Colonies Angloises dans l'Amérique Septentrionale*, 1755.—*Histoire et Commerce des Antilles Angloises*, 1758.—*Acte du Parlement d'Angleterre, connu sous le nom Acte de Navigation*, traduit de l'Anglois, 1760.—*Conduite des Français par rapport à la Nouvelle-Écosse* traduit de l'anglois (of Jeffreys), 1765.—And *Recherches sur l'administration des terres chez les Romains*, Paris, 1779. (See M'Culloch, *Literature*, pp. 34, 46, 223.) A *Traité de la circulation et du crédit*, is sometimes ascribed to Butel-Dumont, Amsterdam, 1771. But the author of this tract is Isaac de PINTO, who, like Butel-Dumont, had written an *Essai sur le luxe*. S. B.

BUTLERAGE. A commuted toll or tax, paid in specie, from about the year 1302 onwards, at a fixed rate upon every cask of wine imported into England by alien traders—part of the additional duties termed the new or small customs, as opposed to the ancient or great customs granted in 1275—*nova sive parva custuma*—as opposed to *antiqua sive magna custuma*. This duty, as such, ceased to be levied 5th July 1809, by the Customs Consolidation Act, 49 Geo. III. c. 98, § 36. The duty was in commutation of the rights of the king's butler (see PRISAGE).

[Dowell, *History of Taxation*, 2d. ed. vol. i. p. 80; vol. ii. p. 237.—H. Hall, *The Customs Revenue of England*, ed. 1885, vol. ii. p. 92.]

BUYING IN. A transaction known only to the stock exchange, where, if a member has sold stock, shares, or other securities, which he fails to deliver on a stipulated date, the buyer is at liberty to purchase from any other member of the stock exchange, and to claim against the original seller the difference between the two prices, supposing the latter to be higher than the original contract price. This is the process: the buyer who claims stock, employs the official broker of the stock exchange to "buy in" against the member failing to deliver. That is, open tenders of stock are invited; and he who sells must be prepared to deliver immediately. A. E.

BY-LAW, BYELAW. A regulation of a municipal or other local authority, or of any corporation, for the management of its internal affairs. The word is also, but much less frequently, used in the sense of additional or secondary law. It is probably derived in the same manner as the archaic word byr-law, which is still to be found in some dialects in the original sense of law or custom of a TOWNSHIP or MANOR, "byr" (Swedish and Danish = by) being the old Norse word for dwelling-place, township, etc. The power of municipal corporations to make by-laws is now regulated by the Municipal Corporations Act, 1882, § 23, and that of local authorities under the Public Health Act, 1875, by §§ 182-188 of that act; those made by the former bodies may be disallowed by order in council; those made by the latter must be confirmed by the local government board.

The Local Government Act of 1888 gives county councils the same power of making by-laws in relation to their county as borough councils have in relation to their borough (§ 16). There are several statutes dealing with the power of railway companies to make by-laws, among which the Railway Regulation Act, 1840 (§§ 7-9) and the Companies' Clauses Act, 1845 (§§ 124-127) are the most important. The by-laws made by railway companies may be disallowed by the board of trade. E. S.

BY-PRODUCT. A by-product is one which is obtained incidentally, together with the product which it is the main object of a particular process to secure. Such products are met with in almost every industry; those connected with metallurgy will alone be considered, as they will serve for the purpose of general illustration. It is, however, often difficult to separate the results of a particular operation or process into the *main* and the *by*-products. For instance, in the conversion of coal into coke by certain modern methods, the tar, ammonia, benzol, and other organic substances are collected as by-products, but their value is very great when considered in relation to that of the coke which is the main product of the coke ovens. In the case of the metallurgical treatment of certain kinds of iron pyrites, or sulphide of iron, the mineral, which contains small quantities of copper, silver, and gold, is treated mainly with a view to the conversion of the sulphur it contains into sulphuric acid. The residue may then be considered to be a poor ore of copper, gold, and silver, but it is rich in iron, and is useful for certain metallurgical purposes. The iron can, however, only be considered to be a by-product, as it certainly would not have been possible to treat profitably the iron pyrites with a view to extract the iron it contained.

In the metallurgy of copper, gold, silver, lead, nickel, and cobalt, the associated metals are extracted as by-products, and during the extraction of silver from certain ores of lead and copper, small quantities of gold pass into the silver, and conversely a small quantity of silver is always associated with gold. The separation of a small amount of one precious metal from a large mass of another in which it is hidden may be effected very cheaply, and both the gold and the silver, in the respective cases, must be considered to be by-products. It has been estimated that no less than 500,000 ounces of silver are annually extracted from gold, the silver being entirely a by-product, but, on the other hand, it would be a very difficult question to determine how far the 30,000,000 ounces of silver obtained by the desilverisation of lead ores, and the 7,000,000 ounces obtained during the treatment of copper ores, are by-products. The whole question of by-products is so extensive that it is not possible to do more than indicate its general nature.

[The special importance of the subject in reference to the production of the precious metals, and in particular of silver, is shown in great fulness of detail in the Memorandum by Professor Roberts Austen, F.R.S., Chemist to the Royal Mint, on the Cost of Production of Silver, laid by him before the Gold and Silver Commission, 1886.]

W. R.-A.

BY-PRODUCTS, THEORY OF VALUE OF. By-products may be considered as a special case of JOINT-PRODUCTS (*q.v.*); that in which one of the joint-products is of relatively small value. This incident does not invalidate the general theory that the prices of joint-products are such that (1) the supply of each commodity just meets the demand; (2) the net advantages of the producer are equal to those of any other occupation between which and the occupation under consideration there exists Industrial Competition. It is conceivable indeed that the gains incident to the by-product may be so small as not to exercise any influence in determining the flow of capital and labour to the occupation. Since the mobility of labour is subject to considerable friction, a very small motive which is not sufficient to overcome friction may produce not so much a small effect as none at all. Upon this view the prices of by-products would be determined only by the *first* of the conditions above stated. Their value would be altogether market as distinguished from normal value. This hypothesis hardly admits of verification. The "equation of net advantages" in different occupations (Marshall, *Economics of Industry*) is not in general fulfilled so exactly that it is possible to determine whether small items are, or are not, taken account of. It is at least safe to say that it is even more difficult to predict price in the case of a by-product as here defined than it is (Sidgwick, *Pol. Econ.* bk. ii. ch. ii. § 10) in the case of joint-products generally. F. Y. E.

CABET, ETIENNE, born at Dijon 1788, died at Saint Louis (Missouri), 8th November 1856. The son of a working man, he received in his first youth an education to correspond with his position in life. He soon, however, broke through these early trammels, and at the age of twelve attended the lectures of his fellow townsman, Jacotot, well known for his method of instruction, his own invention, which at the time was greatly in vogue. Here Cabet made such progress that he was able at fourteen to enter, as a teacher, the Lycée of Dijon. Public instruction appeared at that time to be the occupation he was likely to follow; but changing his course, he turned first to medicine, then to the study of the law, passed, 1812, as doctor *en droit*, and

took a distinguished position among the bar of the department of the Cote d'or. He became, 1815, founder and director of the *Fédération Bourguignonne* for the defence of the national territory, and mixed himself up with the party of the CARBONARI (*q.v.*) He appears to have derived his republican convictions from his father, who was a fiery patriot. About 1820-22 he fixed himself at Paris, and was specially appointed director of the *Vente Suprême*—the name given by the Carbonari to their political meetings. The Revolution of 1830 naturally found him in the first line of its adherents, and urging strongly, but in vain, the convocation of the *Assemblée Constituante*. Abandoning this cry, he consented, 1st August 1830, to be appointed general secretary to the ministry of justice, then, a few weeks later, *Procureur-général* in Corsica. Having offered himself as a candidate at the election for the legislature, he published a statement of his opinions which the government looked on as an attack on established institutions. His old comrade in carbonarism, M. Barthe, then minister of justice, dismissed him from his office. Two months later he was elected deputy for Dijon, and immediately made himself conspicuous among the democratic opposition. He published, among other things, a *Histoire de la révolution de 1830;* for this he was tried before a jury which acquitted him. After escaping a second time, when tried before another judge, he was less fortunate on a third occasion; and, in 1834, was condemned to two years' imprisonment for an article in which he accused the government of July of watching with anxiety for the moment when it could cannonade Paris. After a moment's delay he fled, first to Brussels, then to London, whence he did not return till 1839, when the period of his penalty had expired. He composed, in the last-named city, several historical compilations more or less revolutionary in tone, such as his *Histoire de la révolution française*, in which the most advanced adherents of the "mountain" were glorified, and their acts excused if not approved. Up to this date politics had absorbed him; he was converted to communism by reading the UTOPIA of Sir T. MORE; and he shortly became the most accredited high priest of that school of SOCIALISM, though his communism was not so thorough-going as might have been logically inferred from his principles.

He proposed, in the first place, a transitional period of fifty years between the actual *régime* and that which he dreamed of. The acts of the administration and the laws especially were to be framed so as to permit the definitive establishment of communism at the end of a half century. Successions to property, gifts, and transfers were to be severely scrutinised. Taxation was no longer to be levied on the poor, nor on objects of primary necessity, nor on labour. Wealth and superfluity, on the other hand, were to be subject to PROGRESSIVE TAXATION. The pay of working people was to be fixed by law, and in a sense favourable to them. An amount of 500 millions frs. (20 millions sterling) was to be employed in supplying occupation to the working classes and dwellings for the poor. The army was to be suppressed as far as possible —the men dismissed from the ranks being indemnified and employed on public works till the whole of the force could be disbanded. Marriages among the working classes, the instruction and education of the rising generation, were to be encouraged and aided by an annual charge of 100 millions frs. (4 millions sterling) on the budget.

When the half century mentioned above had gone by every one of the age of sixty-five was to be exempt from work, and provided with a retiring allowance. At this date also complete communism was to begin—at least Cabet's communism. As it would be impossible to attain direct government on account of the extent of the country, resort was to be had to representative government, liberty of the press was to be absolutely suppressed, one single official journal being allowed to appear.

Work, according to his plan, is obligatory, according to strength and capacity, for all—for men from eighteen to sixty-five—for women from seventeen to fifty. Work is, besides, so agreeable in Icaria, as this fortunate country is named, that no one is ever lazy there. All working people are separated according to professions, and then employed in common workshops. Hence beyond question an abundance of products would result, marvellously diversified, and necessarily adapted to the various wants of the community,—made with the minimum of effort, rather only with pleasure, for such is the nature of work in the communism of Icaria,—and divided equally, regard being had to age and sex, among all the citizens, at least up to the point first of what was necessary, then of what was useful, finally of what was agreeable. What is the necessary, the useful, the agreeable? Cabet forgot to define all this.

But the family? Our communist is not able to suppress that, he maintains it. Less logical than PLATO, he thought he might abolish property and respect the rights of the family. Children were to know who was their father and their mother; to the mother the education of her child was absolutely entrusted up to five years old. It was only after this age that the state took charge of it to make of it a complete communist. Concubinage was forbidden, voluntary celibacy was branded as an act of ingratitude worthy of suspicion. All these attractive things and many more are to be found in a stout volume of from 500 to 600 pages called the *Voyage en Icarie*, which Cabet wrote in London, and published in Paris first in 1840. This ran through many editions.

The *Voyage en Icarie* is a romance into the web of which the whole of Cabet's peculiar system is interwoven. Everything is mixed up in it—political reflections, administrative decisions, the cleansing of the streets side by side with the laws concerning the organisation of labour. Municipal reforms come side by side with the solution of social problems. The city of Icaria is described with the utmost detail, and is, as may be supposed, a model city such as is not beheld in this individualistic world. Everything in it is polished, clean, and dusted. It is perfect down to the minutest detail; "the very dogs (p. 44) cause no scandal." The deputies who are late are to come in through a door specially set apart for them, and provided with a bell so that their entrance should be marked to their more exact colleagues. All these charming arrangements inflamed the imaginations of those unhappy wretches who trusted their lives to Cabet's system. For after having disseminated, ever since 1841, through the journal the *Populaire*, his dangerous doctrines, Cabet, to whose good faith we desire to do full justice, convinced in his own mind of the advantages to be derived from his system, bought a million acres of land in Texas, and sent forward sixty-nine trusty followers to carry out the Icarian doctrines in this domain. This first exodus took place 3d February 1848. The colonists reached New Orleans the end of March, and hearing there the news of the revolution of 24th February at Paris, hesitated for a moment to go forward, but finally resolved to make their way to the appointed rendezvous. This first attempt turned out most disastrously, and the disciples of Cabet, decimated by disease, made up their minds to return to the capital of Louisiana, marking their way with the corpses of many of their number, who sank victims of fatigue and disease. On reaching New Orleans they met Cabet, who had quitted Paris December 1848 to join them. The interview was stormy; bitter reproaches were addressed to the high priest of communism, who, however, was not disconcerted. In March 1849 the Icarians, numbering two hundred and eighty, including the new-comers, and having this time Cabet at their head, turned their steps to Nauvoo in Illinois, where they met with fewer trials than in Texas.

Meanwhile Cabet had been condemned to two years' imprisonment on a charge of fraud. There was obvious exaggeration in this charge. Cabet was a fanatic, not a rogue. He was indignant at the accusation; returned for a short time to France; appealed against the sentence, and had the good fortune to see it reversed by the court of appeal in Paris, 26th July 1851. On his return to Nauvoo he found his colony making progress; the numbers mounted up to five hundred in 1855.

Divisions, however, existed in this population, which had few bonds of coherence. Many times a separation was thought of. At last it came; Cabet left Nauvoo at the head of some two hundred of his partisans, and soon after died at St. Louis. The cause of the split appears to have been that Cabet desired to induce the population to submit to an over-severe discipline, analogous to that of some convents of the Middle Ages. The colony of Nauvoo continued to exist, surrounded by difficulties of many kinds, up to 1880, after which date we have lost sight of it.

With respect to Cabet himself we may add, to complete what has been said as to his opinions on matters of a social character, that he is distinguished from communists of other schools in that he gives a quite peculiar religious form to his opinions. He connected his communistic convictions with the earlier ages of the church, and wrote on this subject several books, of which the most important has for its title the words, *Le vrai christianisme suivant Jésus-Christ* (1846), and for its conclusion, "Le communisme c'est le christianisme" (see COMMUNISM). A. C. f.

[For a fuller account of the Icarian colony in America, see Dr. Shaw's *Icaria* (1874) and Nordhoff's *Communistic Societies of the United States* (1875), pp. 333 *et seq.*]

CABLE TRANSFER. A telegraphic order from one banker to another to make a payment to a person or firm indicated in the cablegram. Cable transfers are most frequently used in the commercial intercourse between England and the United States of North America. Those bankers who are in the habit of transacting this class of business take very elaborate precautions, by means of codes and keywords, to avoid fraud. An ingenious chancellor of the exchequer a few years ago remarked that the revenue from bill stamps had fallen off on account of the frequent use of cable transfers, but this can hardly be borne out by the facts, as the bills which were formerly remitted by the persons who now make their payments by means of cable transfers are now used by the bankers to cover their friends for the payments they effect on their telegraphic order. E. S.

CADASTRAL SURVEY. A survey made for the purpose of compiling a public register of the quantity, value, condition, and ownership of the real property of a country. But the term is loosely applied to every official survey of the surface of a country. Thus DOMESDAY BOOK and the Ordnance Survey have alike been referred to as, in a sense, cadastral surveys. The purposes served by such surveys include the determination of the sums to be contributed to the revenue, or to any other common fund, by individual owners and occupiers of property, or by the community resident within any prescribed area; the registration of boundaries and of changes of ownership; the division and subdivision of a country into administrative and representative areas; and the arrangement of

schemes for public works, or drainage and other local improvements.

In the United Kingdom the general survey known as the ordnance survey was intended at first for purely military purposes, and, in particular, to provide plans for purely military purposes (hence the name the ordnance department); but as the real value of the work and the various uses which it might serve were perceived, the scheme expanded, and in England and Wales it is now proceeding on the following scale: Towns having 4000 or more inhabitants are surveyed on a scale of 1·500 of the linear measurement, which is equivalent to 126·72 inches to a mile, or 41⅔ feet to an inch; parishes (in cultivated districts) 1·2500 of the linear measurement, equal to 25·344 inches to a mile, or 1 square inch to an acre; counties on a scale of 6 inches to a mile; kingdom, a general map 1 inch to a mile. The maps issued by the survey are largely used for evidencing the particular properties referred to in legal and other documents, for planning public and private works, and for the delimitation of boundaries. But the absence of any information as to the value of the property delineated—an essential element in a true cadastral survey—makes the ordnance survey inapplicable to purposes of taxation, and the system of land registration and transfer which such a survey renders possible has not yet been fully organised in the United Kingdom.

In France, cadastral survey has, since 1790, been a matter of great importance owing to the prominent position of the *contribution foncière* in the financial system of that country. The French literature of the subject is proportionately extensive. In Germany a fairly accurate cadastral survey has (1861-1864) been completed.

Adam Smith (*Wealth of Nations*, bk. v. chap. ii. art. i.) gives some examples of cadastral surveys, and appears to think that the labour and expense they entail is out of proportion to their value. The point of view from which he is considering the subject is, however, that of taxation alone. The labour and delay incident to an adequate cadastral survey in England have been regarded as a fatal practical objection to schemes like J. S. Mill's for appropriating the Unearned Increment of rent.

[See report of the progress of the ordnance survey to the 31st December 1886 (*Parliamentary Paper* [c. 5005]).—*Dictionnaire de l'Administration Française*, par M. M. Block (2d ed., 1881).—*Recueil Méthodique des lois, décrets, règlements &c. sur le Cadastre de France* (Paris, 1811).—*Du Cadastre et de la Limitation des Héritages, par F. H. V. Noizet* (Paris, 1861).—*Denkschrift über die Ausführung des Gesetzes vom 21st May 1861, betreffend die anderweitige Regelung der Grundsteuer* (Berlin, 1865).] T. H. E.

CADET, Félix, born at Paris 1827, died at Viroflay near Paris 1888. After brilliant progress in his university studies, he commenced his career as a professor, lecturing first on history, then on philosophy. He gave, 1866-67, with great success, a course of lectures on political economy, before the *Société Industrielle*, of Reims; and divided with Horn, in 1866, the *Léon Faucher* prize, given by the *Académie des Sciences morales et politiques* (*Pierre de Boisguilbert, précurseur des Économistes*, 1870, in 8vo). He then undertook a series of *conférences* (discussions) at Rheims, also under the wing of the Société Industrielle of that city, the object of these being to examine curiously the lives and criticise the works of Boisguilbert, Vauban, Quesnay, Turgot, Smith, and Franklin. After 1870 he gave himself up principally to teaching, a career which he pursued with great success, and died honorary inspector-general of public instruction. A. C. f.

CAGNAZZI, Luca Samuele, born at Altamura, in the province of Bari, 1764, died 1852. By profession originally a teacher of mathematics, he was appointed, 1806, to a professorship in this study in the university of Naples. His life was full of trouble; having been concerned in political intrigues, he had to flee from Naples and, after wandering, nearly always on foot, through Italy and Switzerland, and after being imprisoned more than once, he had to seek refuge in Florence. He returned to Naples under Murat's government. After the change of government, he was elected deputy for Bari, and was President of the chamber on the 15th May 1848, when it was dissolved by the troops. To escape capture he fled again and returned to Florence, where he fell ill. Feeling his end at hand, and wishing not to die in exile, he obtained his pardon from the King of Naples, through the intervention of the Grand Duke of Tuscany. He deserves mention for having written on parallel Curves, in a time when this method of demonstration had some novelty. As an economist he wrote, besides an *Essay on the population of the Realm of Naples*, *Saggio sulla popolazione del regno di Puglia ne' passati tempi e nel presente* (Napoli, stamperia Trani, 1820 and 1839, 2 vols. in 8vo), what was perhaps his most important work, in 1813, a little manual of political economy, *Elementi di Economia politica* (Napoli, stamperia S. Giacomo), and, 1827, a pamphlet on *La Scienza della economia politica* (Venice). Some years earlier he had published a manual of statistics: *Elementi dell' arte statistica*, Napoli, stamperia Flautina, 1808, 2 vols. In 1839 he published his latest statistical work: *Sullo stato della Statistica nel Reame di Napoli al cadere del secolo XVIII. e cominciare del XIX.* Napoli. He desires government interference whenever practicable, and wrote, in particular, a book on ancient and modern economical principles (*Analisi dell' economia privata e pubblica degli antichi, relativamente a quella dei moderni*,

Napoli, stamperia della soc. Filomatica, 1830) to point out that modern principles are preferable! M. P.

CAIRNES, JOHN ELLIOT (1823-1875), was born at Castle-Bellingham, County Louth. His childhood was spent at Drogheda, whither his father, who was a large brewer, moved two years later. He was educated first at Kingstown and afterwards at Chester; and, as his teachers did not consider that his abilities fitted him for college life, he was, on leaving school, placed in his father's counting-house. Here he remained three years, developing a taste for study, and gradually finding business grow more and more irksome. Eventually his father made him a small allowance, upon which he lived at Trinity College, Dublin. He took the degree of B.A. in 1848, and that of M.A. in 1854. He subsequently studied law, and was called to the Irish bar in 1857, but he does not appear to have ever practised. During this period he also studied chemistry, engineering, and political economy, and engaged in journalistic work, his favourite topics being social and economic questions affecting Ireland. In 1856 he competed successfully for the WHATELY professorship of political economy in the university of Dublin, and from this time political economy became the study of his life. He held the professorship for five years, the full period during which it was tenable. It was a condition of the tenure that the professor should publish annually at least one lecture; and accordingly in 1857 he published the whole of his first course of lectures under the title of *The Character and Logical Method of Political Economy*. (A second edition appeared in 1875, shortly before the author's death.) In 1859, while still holding the Whately professorship, he was appointed by Mr. Cardwell, then Irish secretary, professor of political economy and jurisprudence at Queen's College, Galway. In 1859-60 he published in *Fraser's Magazine* and the *Edinburgh Review* three papers on the effects of the Australian and Californian gold discoveries. In 1862 appeared *The Slave Power*, a work that grew out of his last course of Dublin lectures. This book, which was dedicated to J. S. MILL, contained a philosophical analysis of the characteristics of slave labour, and of the social and economic effects of slavery, and was at the same time a defence of the cause of the Northern States in the American Civil War. It was an immediate success, and exerted a powerful influence upon English opinion. A second edition was called for in the following year.

From this time Prof. Cairnes enjoyed a high reputation as an economist. The period in question was one when political economy, and the Ricardo-Mill school in particular, was in the ascendant. In many departments of the science the doctrines taught by Mill were generally accepted as complete and final. It was to this dominant school that Cairnes belonged, and amongst contemporary English economists he came to be ranked second only to Mill himself. In 1860 he married Eliza Charlotte Alexander, sister-in-law of his great friend Prof. Nesbitt. In 1865 he moved to the neighbourhood of London, and in the following year he was appointed professor of political economy at University College, London. He did not, however, resign the Galway professorship till 1870, it being allowed him to appoint a deputy to lecture in his place during the last three years of his tenure. He was, at the time of his moving to London, a confirmed invalid, subject to attacks of rheumatic gout of constantly increasing severity. Gradually he was reduced to a state of complete physical helplessness, and his sufferings were great. His intellectual vigour was, however, in no way impaired, and he retained to an extraordinary degree his accustomed energy and cheerfulness. He is spoken of by those who knew him as possessing great conversational gifts and admirable humour; and whilst himself cut off from active political life, he continued to take the strongest interest in current politics. He was an intimate friend of J. S. Mill, and also of Prof. FAWCETT and Mr. L. H. Courtney. Through them and others his political influence was considerable, especially on Irish questions. Prof. Fawcett has himself put on record the great reliance that he placed on Cairnes's political judgment, and the frequency with which they discussed current political questions together. Cairnes had always been a strong advocate of united education in Ireland (see his *Letter to J. S. Mill on "University Education in Ireland,"* 1866), and it is said on the best authority that he was the unseen centre of the operations that led to the defeat of Mr. Gladstone's Irish University Bill in 1873. The state of his health compelled him in 1872 to resign his post at University College, and on his retirement the honorary title of Emeritus Professor was conferred upon him. In the following year he received from the university of Dublin the honorary degree of LL.D. In 1873 he published a volume of *Political Essays*, about half of which is taken up with Irish questions, and also a volume of *Essays in Political Economy, Theoretical and Applied*. The latter volume contained the "Essays on the Gold Question" already referred to, and other essays that he had written for various periodicals in the course of the preceding fourteen years. In 1874 appeared *Some Leading Principles of Political Economy newly Expounded*, a work which is usually regarded as his most important contribution to economic literature. He died on 8th July 1875, after great suffering, borne, for many years, with extraordinary fortitude. He left a widow and three children.

After Mill's death in 1873, Cairnes occupied in general estimation the foremost place

amongst English economists, though it may be doubted whether his subsequent influence upon the development of the science has been as great as that of his contemporary JEVONS. His work in economics belongs to three departments of economic inquiry broadly distinguishable from one another, namely (1) the logic of political economy, (2) the investigation and interpretation of contemporary economic facts, (3) economic theory.

(1) The *Logical Method of Political Economy* is an admirably precise and clear exposition of the province and method of economics from the point of view of the Ricardo-Mill school, and it has long been regarded as the authoritative text-book of English political economy so far as its logic is concerned. Cairnes urges with great force that political economy is properly concerned with what is, not with what ought to be, and that its principles are therefore theorems of fact, not rules of conduct. It falls into line accordingly with theoretical sciences such as astronomy and physiology, not with practical arts such as the art of medicine or the art of legislation. The method of study appropriate to the science is held to be the DEDUCTIVE METHOD, and the ultimate premises of political economy are found to consist in a few simple facts of human nature taken in connection with certain physical properties of the soil and man's physiological constitution. The body of doctrine thus established is in itself abstract and hypothetical, since the forces taken into account are not the sole, although they are by far the most important, forces determining the phenomena of wealth. Hence in the application of economic laws a constant appeal to facts is necessary, in order to discover and allow for the effects of disturbing causes, that is, for the modifications that happen to be introduced in particular instances by the minor influences affecting economic phenomena. Cairnes's whole treatment of the subject is conservative in tone, and he has no sympathy either with those who, like Cliffe LESLIE, advocate the use of the historical method in political economy, or with those who, like Jevons, regard the science as essentially mathematical in character.

(2) The best examples of Cairnes's method of dealing with contemporary economic problems of a concrete kind are to be found in the economic chapters of the *Slave Power*, and in the *Essays on the Gold Question*. In both these cases he was fortunate in selecting topics of peculiar interest at the time when he wrote, and he discussed them with such originality, lucidity, and force, as necessarily to command attention. His treatment of the problems is, however, of more than merely temporary value; and in particular his conclusions in regard to the general economic characteristics of slave labour, and the conditions essential in order that such labour may be temporarily profitable, are exceptionally good instances of established economic doctrines, resting mainly on an INDUCTIVE METHOD. The *Essays on the Gold Question*, though open to criticism in certain respects, may, in regard to style, be taken as models of clear and well-arranged exposition. They deal with the effects of the Australian and Californian gold discoveries, and the most striking of them is perhaps that which treats of the "course of depreciation." Cairnes's theory is that whilst an increased supply of gold will raise the prices of different classes of commodities and services with unequal rapidity, there is in the apparent irregularity nothing capricious or abnormal. He holds, on the other hand, that the movement is governed throughout its course by economic laws, and that it is possible broadly to determine the order in which different kinds of things will be affected. The working out of this theory is exceedingly acute and suggestive; and the statistical verification that Cairnes offers of his theoretical anticipations may be taken as an example of his work as a statistician.

(3) The improvement of economic theory in general accordance with the doctrines of Mill and his predecessors is given as the main purpose of the *Leading Principles of Political Economy newly Expounded*. This work was not intended to constitute an exhaustive treatise on economic science. It may rather be regarded as a critical commentary on Mill's *Principles of Political Economy*. The chief topics discussed are SUPPLY AND DEMAND, the analysis of COST OF PRODUCTION, the WAGES FUND theory, TRADE UNIONS, INTERNATIONAL TRADE and INTERNATIONAL VALUE. It is impossible in the space at our disposal to give even the briefest outline of Cairnes's views on the above questions. His method of treating them is nearly always ingenious and subtle. The wages fund theory, for instance, as resuscitated by him, is a far more complex and ingenious doctrine than that which Mill first formulated in his *Political Economy* and afterwards repudiated. Cairnes's theory is that wages are paid out of capital, and that, given the nature of the prevailing industries, the whole amount expended in wages necessarily bears a definite relation to a nation's total capital. In further working out the theory, he lays great stress upon the law of the tendency of profits to a minimum, and, in fact, assumes that profits are already at or within a hand's breadth of the minimum. Little note is taken of the distinction between profits and interest. The laws regulating wages are therefore made to depend ultimately on the laws regulating the accumulation of capital.

Cairnes is emphatic in his recognition of the existence of non-competing industrial groups. "No doubt," he says, "the various ranks and classes fade into each other by imperceptible gradations, and individuals from all classes are constantly passing up or dropping down; but

while this is so, it is nevertheless true that the average workman, from whatever rank he be taken, finds his power of competition limited for practical purposes to a certain range of occupations, so that, however high the rates of remuneration in those which lie beyond may rise, he is excluded from sharing them." This is in itself not much more than a restatement of a passage in Mill's chapter on the differences of wages in different employments. Much more prominence is, however, given to the doctrine by Cairnes, especially in its bearing on the theory of normal value; and it has hence come to be particularly associated with his name.

While the *Leading Principles* exercised a very stimulating influence upon economic discussion in England, the doctrines laid down in it cannot be said to have met with anything like general acceptance, even amongst those economists who belong, broadly speaking, to the same school as Cairnes himself. On the whole, the effect of the book was more destructive than constructive, for it helped to shake faith in the finality of the Ricardo-Mill doctrines. Cairnes tended to exaggerate the degree of divergence between Mill and himself, and the net result of his criticism was to impair Mill's authority to a much greater extent than he can himself have anticipated.

It has been said that as a controversialist Cairnes was deficient in intellectual sympathy, and the charge must be allowed. With the best intentions, he often fails to convey to his readers a fair idea of the real meaning of the doctrines he is combating. A striking instance of this is to be found in his treatment of Jevons's theory of the relation of value to utility. The theory in question is based entirely upon the distinction between total utility and final degree of utility, and yet, while criticising Jevons's views somewhat severely, Cairnes never once refers to this distinction. He confesses himself unversed in mathematics, and to this may perhaps be attributed both his misunderstanding of Jevons, and also a certain characteristic looseness of thought in several cases where quantitative notions are involved. He analyses cost of production, for instance, into effort and ABSTINENCE, which are in themselves incommensurable quantities, without ever seeming adequately to realise the necessity of reducing these incommensurables to terms of some common unit. True to the views expressed in his earliest work, he always showed great confidence in the validity of deductive reasoning in economics, and he was never afraid of pushing his theories to their logical conclusions. We have a remarkable instance of this in his working out of the wages fund theory, where he does not shrink from the paradox that an increase in the supply of labour will *cæteris paribus* diminish not merely the average rate of wages, but actually the whole amount expended in wages.

Cairnes will always be remembered as at once one of Mill's most distinguished disciples, and one of his most vigorous critics; and his works are likely to retain on their own account an important place in the history of economic literature. All that he wrote has a striking individuality, and he expounds his views with a literary skill and a persuasive force that it would be difficult to surpass.

[See Articles in the *Times* for 9th July 1875, by Mr. L. H. Courtney.—In the *Fortnightly Review* for August 1875, by Professor Fawcett.—In the *Encyclopædia Britannica*, by Professor Adamson.—In the *Dictionary of National Biography*, by Mr. Leslie Stephen.—Cliffe Leslie, *Essays* IV. and VI., pp. 41 and 60.] J. N. K.

CAISSE. French word for (1) a chest where money is kept; (2) the cashier's office or desk in a commercial or banking establishment; (3) the money in hand; (4) the cash book or the cash account; (5) an establishment where money is administered, *e.g. Caisse de dépôts, Caisse d'amortisation.* E. S.

CALL. This is an OPTION (*q.v.*) and an option is usually worth something. On the stock exchange there are dealers in puts and calls (see PUT AND CALL); a call meaning the privilege of calling for a specified amount of stock bonds or shares at an arranged price at a specified date in advance. Calls extend from one day to three months and even longer. Thus, the agreement may be that a buyer of a call, in January, gives to the seller 1 per cent on £10,000 Egyptian unified bonds for the privilege of calling for the delivery of these bonds at the end of February. The price usually taken is the actual quotation plus interest, or (to use the stock exchange phrase) continuation, rates which may accrue in the interval. We will say the specified stock is worth 80 in the middle of January, and to this price is added three fortnights' rates of continuation or interest at $\frac{1}{4}$ per cent per fortnight, so bringing up the call price to $80\frac{3}{4}$. If, in the meanwhile, the buyer of the call has been able to sell this amount of the stock at anything above $80\frac{3}{4}$, the difference represents his profit on the operation against which has to be set his first outlay of 1 per cent.

CALL is also used in connection with joint-stock companies and loans which are not fully paid up at the time of issue. For the convenience of subscribers it is usually arranged that the amounts paid shall be, on application, say 5 per cent of the amount, on allotment, 10 per cent, and the remainder is paid by degrees according to the dates of the "calls." Often, also, it is arranged that only part of the nominal capital shall be paid up, the remainder not to be called up without the sanction of the shareholders. In the case of the City of Glasgow Bank, in which the liability of shareholders and trustees of shareholders was "unlimited," the

calls continued until many contributors had paid up to the utmost farthing of what they possessed. Limited and reserved liability acts have put some limit to this terrible, because indefinite, risk. A. E.

CALONNE, Charles Alexandre de, born at Douai 1734, died in Paris 1802. Originally a magistrate, he became, 9th November 1783, comptroller-general of the finances, which office he held till 8th April 1787, and in which he proved himself singularly incompetent. The commencement of his official career, however, at least in those points which were concerned with the chamber of discount, *la caisse d'escompte*, was successful enough; but before long the treasury, under his direction, became an institution only kept going by expedients. The fertility of his pen dazzled him; he considered difficulties as solved the solution of which was only deferred. Under his ministry the first assembly of Notables was convened. Having emigrated to England when the Revolution broke out, he returned to France in 1802, and died there a few months afterwards.

He successively published: *Correspondance de Necker et de Calonne* (1787, in 4to).—*Requête au Roi* (London, 1787, in 8vo).—*Réponse de Calonne à l'écrit de Necker* (London, 1788, in 4to).—*Lettres de Calonne au Roi*, 9 février et 3 avril, 1789.—*Note sur le mémoire remis par Necker au comité de subsistance* (London, 1789).—*De l'état de la France tel qu'il peut et tel qu'il doit être* (London, 1790).—*Observations sur les finances* (London, 1790, in 4to).—*Esquisse de l'état de la France* (1791, in 8vo).—*Tableau de l'Europe* (1795, in 8vo).—*Des finances publiques de la France* (London, 1797, in 8vo). A. C. f.

CALVIN, Jean (1509-1564). The name of this illustrious theologian rightly finds a place in an economic dictionary. His writings stand in the same relation to the Reformation as those of Aquinas to the Middle Ages. The clearest and wisest thoughts of the Reformers on political, social, and economical questions are to be found in his works. He was qualified in no common measure to form just conclusions on these subjects. A profound lawyer, conversant with ancient and modern history, familiar with the state of society in different countries, engaged habitually in the discussion and settlement of questions of government, administration, law, and police, he combined theoretical with practical knowledge in an unusual degree. Added to these qualifications were a sagacity, a historical insight, and an expository and dialectical power rarely equalled.

Calvin's writings consist of his *Institutes*, the greatest theological product of the Reformation, his Commentaries on Scripture, his letters, and some polemical and theological tracts. These, coupled with information furnished by the records of Geneva, are the authorities for his views on economical questions. His opinions may be best discussed under the following heads (1) church and state, (2) property and related questions, and (3) usury.

1. Calvin regards church and state as two separate and independent institutions. The state exists for man's temporal, the church for his eternal welfare. Each has its own officers and organisation. Neither should intrude into the sphere of the other: each should assist the other. All citizens are subject to both. The clergy are not exempt from the jurisdiction of the state. The church inflicts spiritual penalties only. Calvin was the first to distinguish the church from the state in such a way that both became independent powers, possessing an inherent jurisdiction. Up to his time the state had been subordinated to the church, or the church merged in the state. This view of the separateness and autonomy of the church and state has been of immense indirect effect on political economy. It has fostered the spirit of freedom: it has done justice to man's secular interests: it forms the foundation for the modern movement in favour of the separation of church and state. Such a separation was, however, far from Calvin's thoughts: on the contrary, he instituted the closest alliance between church and state. Magistrates perform sacred and legitimate functions. They must vindicate both tables of the law. Tyrannical magistrates are to be endured, but no obedience is due to commands at variance with God's will. Tributes and taxes are the legitimate income of princes: but their revenues are not so much private as public, the "blood of the people which it is inhuman not to spare." Alike in church and state the one supreme ruler is God (*Instit.* iv. 20).

2. Calvin saw clearly that the existence of Property was morally necessary. If there were no such thing as property there would be no test of justice and integrity (on Numb. xxxi. 28). The Libertines of his age advocated a community of goods, drawing their favourite argument from the practice of the primitive church recorded in Acts ii. 44; iv. 32. Calvin wrongly denies that such a community of goods ever existed. He contends that the community which prevailed had reference exclusively to the wants of the poor: that the surrender of their property was not made by all: that it did not embrace all their possessions, and that all did not receive equal shares. He is as opposed to the exaltation of voluntary poverty as he is to a community of goods. It is an ordinance of God that some should be richer than others. All men are not commanded to sell all. The rich young man of the Gospel was covetous and was bidden to sell all for his soul's sake. But the farmer sins who, forced by no necessity, sells the farm by which he supports his children (on Matt. xix. 16). Experience and observation had taught Calvin the importance of Trade and Commerce,

and he was not slow to defend their lawfulness and value. He knew that POVERTY arose when trade fell off, and hence at a memorable conjuncture in the social history of Geneva he proposed to set up the weaving of cloth and velvet as a means of preventing poverty. His advice was taken, and for many years Geneva was famous for its manufactures of cloth and velvet. It has been too hastily inferred from this circumstance that Calvin was favourable to the "industrial ideal" of society. No passages can be quoted which prove that such was the case. It is unquestionable that he was ready to do all he could to augment the prosperity of Geneva, but his ideal was moral rather than industrial. LUXURY he condemned as sinful. He was a strenuous upholder of SUMPTUARY LAWS. (For particulars see *Stähelin*, i. 342.) But his legislation regarding the colour and shape of clothes, adornment, and so forth, was not conceived in an illiberal temper. He was equally opposed to those who would limit men's use of earthly goods to the bare necessaries of life, as to those who would allow them to live as they pleased (*Instit.*, iii. 10). Calvin put down idleness and begging as immoral, but for those in real poverty he made admirable provision. To care for the poor was in his view the duty of the church. A special grade of officers had been formed for this purpose in apostolic times (on Acts vi.), and this grade he revived. He distinguishes between two classes of deacons: those who administer the affairs of the poor, and those who tend the sick poor, the former being specially deacons (*Instit.* iv. 3, 9; iv. 5, 15). His famous Ecclesiastical Ordinances provide for the yearly election of both classes of deacons. The first class took charge of the poor funds, the poor throughout the city, and the management of the hospital. The deacons tending the sick lived in the hospital (Kampschulte, p. 466). Ecclesiastical property he held it unlawful to alienate. What has once been devoted to Christ and the church is not the property of the magistrate. The magistrates should have the power of supervising and the deacons of administering this property (letter to Viret, 1542; on Acts iv. 32). It is clear that Calvin was as anxious as Knox himself to preserve ecclesiastical property for ecclesiastical uses, and that he did not wish the church to draw its revenues direct from the state. TITHES were public burdens and should be paid.

3. Calvin was the first theologian who rejected the current opinions regarding the sinfulness of USURY. His views on this subject are to be found in his commentaries on Ex. xxii. 25; Lev. xxv. 35; Deut. xxiii. 19; Ps. xv. 5; Ezek. xviii.; Luke vi. 35, and in the famous letter (Works, vol. viii. 223, ed. Amst.) Usury is not condemned by Scripture. Scripture forbids the exaction of usury from the poor, but allows it in the case of the rich. The laws of the Jews which prohibited the taking of interest by Jews from Jews are political not moral laws: these very laws permitted Jews to receive interest from Gentiles. Usury is repeatedly condemned in the Old Testament, but never on grounds which are valid for all Christians. The prohibition of interest in the Old Testament is a provision in the interests of the poor. The exaction of interest from the poor has often produced tumults, as in Rome. Calvin rejects with proper scorn the substitution of "usura" for "the detested word fœnus," holding that there is no description of "fœnus" to which the name "usura" may not be given. He exposes the evasions by which usury was exacted without being mentioned by name, a poor man requiring to repay the loan of six measures of wheat by a return of seven. The question is one not of words but of things. ARISTOTLE'S argument, accepted by Ambrose and Augustine, that usury is unnatural because money is barren, is worthless. May not a cheat make much profit by trading with another man's money? A man purchases a farm. Is not the produce convertible into money? Usury is not unlawful unless it contravenes equity. Usury therefore (1) must not be exacted from the needy; (2) the lender must not forget to be charitable; (3) regard must always be had to natural equity; (4) the borrower must be as much enriched by the transaction as the lender; (5) our conception of justice must be drawn from the Word of God and not from prevailing usage; (6) the interests of the state as well as the individuals concerned must be considered; and (7) the limit of interest fixed in each state must not be exceeded. But usury should not be made a means of livelihood. It is plain from this passage that Calvin rejected the two chief arguments against usury—its condemnation by Scripture, and the barrenness of money; but that he felt rather than saw the distinction between usury and INTEREST. Whether he discerned the principle on which the payment of interest rests is doubtful. He says, indeed, that no creditor can ever lend money without loss to himself, and that usury ought to be paid to the creditor in addition to the original sum to compensate him for loss, but it is uncertain whether he saw that this principle applies in all cases. (On Ex. xxii. 25 and related passages.)

The best edition of Calvin's writings is that under the charge of Baum, Cunitz, and Reuss, the publication of which began in 1863. The Amsterdam edition of 1667-71, 9 vols. folio, is that commonly quoted. See also Henry, *Das Leben Calvin's*, Hamburg, 1835-44.—Stähelin, *Johannes Calvin Leben und ausgewählte Schriften*, Elberfeld, 1863.—Kampschulte, *Johann Calvin, Seine Kirche und Sein Staat in Genf*, Leipzig, 1869.—Dyer, *The Life of John Calvin*, 1850.—Reyburn, *John Calvin: His Life, Letters, and Work*, 1914.—And

Herzog, *Real-Ency.* "Wucher."—Böhm-Bawerk, *Capital and Interest*, Mr. Smart's translation I. 28.—Wiskemann, *Darstellung der in Deutschland zur Zeit der Reformation herrschenden National-ökonomischen Ansichten* (1861).—Elster, *Johann Calvin als Staatsmann*, etc.—*Jahrbücher für Nat. Ökonomie*, 1878, vol. xxxi. p. 163 *et seq.*—Lecky, *Rationalism*, ii. 265, ed. 1878. W. P.

CAMBAGE, Droit de. This was a due payable in parts of mediæval Germany, France, and the Netherlands, by the tenants to their lord for the privilege of brewing ale. The term occurs in some chartularies during the first half of the 12th century, and about a hundred years later cambage with other dues was granted by Guy, count of Flanders, to the hospital of St. Bartholomew of Bethany. In England the seignorial revenues from ale appear to have been almost, if not entirely, derived from Amercements in the manor courts for breaches of the assize of ale, and the term "cambage" was not used. The word was no doubt derived from the low Latin, *camba*, an aleshop, and *camum*. The latter was a kind of effervescent ale brewed from barley with ginger and other spices.

[Ducange, *Glossarium mediæ et infimæ Latinitatis*, 1733.] A. H.

CAMBIST. See Exchange Broker.

CAMBON, Pierre Joseph (1756-1826), the greatest financier of the period of the French Revolution, was a native of Montpellier, where his father carried on a large business as a wholesale grocer. He was well educated, and, as he showed a great aptitude for business, was admitted, while still young, a partner in his father's firm. He was highly esteemed by his fellow-citizens, was elected in 1790 a municipal councillor of Montpellier, and in 1791 a deputy for the department of the Hérault to the Legislative Assembly. He was already well known in Paris, where he had resided for several months during 1789 and 1790 as a *député suppléant* to the Constituent Assembly, and was immediately appointed reporter of the committee of the national treasury. In this capacity he showed such complete mastery of financial detail that he was in 1792 chosen by the financial committee of the Assembly to be their ordinary reporter. The declaration of war with Austria made it imperative for the Assembly to raise large sums of money at once, and Cambon in three elaborate reports laid the financial state of France before his colleagues. A careful study of these reports, which were entitled *Tableau des besoins et des ressources de la Nation*, presented on 3d April 1792; *Rapport sur la situation des Finances*, on 17th, 18th, and 19th April; and *Rapport sur la situation générale des Finances*, on 15th May, is absolutely necessary for any one who would appreciate the financial condition of France when foreign war added to the complications of the Revolution. The ability of the reporter was generally recognised; Cambon was elected President of the Assembly in August 1792, and in the following month first deputy for the Hérault to the Convention. He was naturally elected to its financial committee, of which he became the ordinary reporter. The war with Austria had been followed by war with Prussia, and after the execution of Louis XVI. by war with Europe. The financial condition of France was desperate. All Cambon could do was to propose issues of Assignats, of which 400,000,000 of livres (£16,000,000) in nominal value were directed to be created 17th October 1792, and 800,000,000 (£32,000,000), 1st February 1793. Cambon was elected a member of the Committee of General Defence in January 1793, and of the first Committee of Public Safety in April 1793. This committee was replaced 14th July 1793 by what is known as the great Committee of Public Safety, to which Cambon was not elected. Thus freed from the cares and responsibilities of general administration, Cambon devoted himself wholly to the management of the finances of France. The two chief causes of the confusion which prevailed were the excessive amount of assignats in circulation and their consequent depreciation, and the ignorance prevailing as to the actual debt of the country. To remedy them Cambon proposed to prepare a Grand Livre of the national debt. His aims are best indicated in the title of his report, presented to the Convention on 15th August 1793, *Rapport sur la dette publique, sur les moyens à employer pour l'enregistrer sur un grand livre; pour admettre la dette publique en payement des biens nationaux qui sont en vente; pour retirer et annuler les anciens titres de créance; pour accélérer la liquidation; pour régler le mode actuel de payement de la dette consolidée dans les chefs-lieux de district; et pour retirer les assignats de la circulation.* This is the great measure on which Cambon's fame as a financier rests. There is no need to examine his other reports; they all had the same intent, to realise the property of the nation and thus extinguish the assignats as far as possible. He was aided in his endeavours by other less known deputies, who worked in the Financial Committee, of whom the ablest were Ramel and Johannot, and by Robert Lindet, who had charge of the department of "national subsistences or resources" in the great Committee of Public Safety. Throughout the Reign of Terror, Cambon worked at the finances, and practically administered them. He had no sympathy with the views of Robespierre, and disliked the measure of the "maximum," which was forced on the Convention for political reasons, and was economically indefensible. This attitude made him most obnoxious to Robespierre, who attacked him by name in his last speech in the Convention on 8th Thermidor

year II. (26th July 1794), and would have proscribed him had not he himself been overthrown on 9th Thermidor. During the first months of the rule of the Thermidorians, Cambon maintained his position, but after the return of the proscribed Girondins, and the insurrections of Germinal and Prairial year III. (April, May 1795), he was attacked as a terrorist, because he had not opposed the Terror, and he was ordered to be arrested. He was, however, amnestied in the general amnesty of Brumaire year IV. (October 1795), and then retired from public life. In 1797, in a published *Lettre à ses concitoyens sur les Finances*, he promised to write a history of his administration of the finances with illustrative documents, but unfortunately he never fulfilled this promise. He returned to Montpellier a poorer man than when he became a deputy, and continued peacefully occupied in his business until 1815, when he gave in his adhesion to Napoleon on his return from Elba. This caused him to be exiled from France as a regicide in 1816, and he died at Brussels in 1826. Cambon was without doubt the greatest financier of the French Revolution; he shared MIRABEAU'S abhorrence of national bankruptcy; he strove to draw his country from the financial embarrassment caused by the depreciation of the assignats; he managed the treasury skilfully and with absolute honesty, and he possessed MONTESQUIEU'S power of making financial statements lucid and even interesting.

There exists no work devoted to Cambon and his measures; the best biographical sketch is in the *Biographie Rabbe* (1836); there are some interesting notices in *Montpellier sous la Révolution*, by Duval-Jouve, Montpellier, 1878; on his administration see *Les Finances de l'ancien Régime et de la Révolution*, by René Stourm. The following list of Cambon's most important financial speeches and reports is extracted from M. René Stourm's *Bibliographie des Finances au XVIIIième Siècle*, published in the *Annales de l'École Libre des Sciences Politiques*, for 15th October 1890.—Legislative Assembly, *Rapport sur la situation de la Trésorerie nationale* (10th October 1791).—*Rapport sur les états de prévisions de dépenses pour 1792 et les comptes à présenter par les ministres* (11th November 1791).—*Opinion sur le rapport du Comité de la caisse de l'extraordinaire et sur la dette publique* (24th November 1791).—*Tableau des besoins et des ressources de la nation* (3d April 1792).—*Aperçu des recettes et des dépenses de 1792* (6th April 1792).—*Rapport sur la situation des finances à la date du 1ier Avril 1793* (17th, 18th, 19th April 1792).—*Rapport sur la situation générale des finances* (15th May 1792).—Convention, *Rapport et projet de décret sur une nouvelle création de 400,000,000 d'assignats* (17th October 1792).—*Rapport et projet de décret concernant la suppression de la caisse de l'extraordinaire et sa réunion à la Trésorerie générale* (24th December 1792).—*Projet de décret pour une nouvelle création d'assignats de 800,000,000* (1st February 1793).—*Rapport sur la dette publique*, etc., quoted in text (15th August 1793).—*Projet de décret pour défendre la vente, cession, négociation, ou transport de titres actuels constatant les créances non viagères sur la nation* (11th September 1793).—*Rapport sur les domaines aliénés* (1st Frimaire year II., 21st November 1793).—*Projet de décret pour démonétiser les monnaies d'or et d'argent* (11th Frimaire year II., 1st December 1793).—*Projet de décret relatif aux assignats démonétisés* (24th Frimaire year II., 14th December 1793).—*Rapport sur le compte des recettes et des dépenses de la nation, depuis le 1ier Mai 1789 jusqu'au 1ier Septembre 1793* (3d Germinal year II., 23d March 1794).—*Rapport et projet de décret sur les mutations par décès des inscriptions au grand livre* (18th Fructidor year II., 4th September 1794).—*Rapport et projet de décret sur la liquidation des compagnies financières connues sous le nom de caisse d'escompte, assurances sur la vie, assurances contre les incendies* (25th Fructidor year II., 11th September 1794).—*Rapport sur les pensions dites ecclésiastiques* (2d Sansculottide year II., 18th September 1794).—*Discours au sujet du compte de l'argenterie des églises* (12th Brumaire year III., 2d November 1794).—*Rapport et projet de décret sur les taxes révolutionnaires* (6th Frimaire year III., 26th November 1794).—*Rapport sur les moyens à prendre pour retirer les assignats de la circulation et sur la création d'une loterie* (3d Pluviôse year III., 22d January 1795).—*Résumé des diverses opinions présentées à la Convention Nationale sur le projet du Comité des Finances pour accélérer le retirement des assignats* (7th Ventôse year III., 25th February 1795).—*Rapport sur la fixation de la contribution foncière à imposer sur les inscriptions consolidées et viagères* (16th Ventôse year III., 6th March 1795). (See ASSIGNATS; MAXIMUM.) H. M. S.

CAMBRELENG, CHURCHILL C., born in North Carolina 1786; died in Long Island 1862. He was engaged in business in New York; and became member of congress 1821-39. An ardent free trader, he published anonymously, in 1821, *An Examination of the New Tariff proposed by the Hon. Henry Baldwin, a Representative in Congress*, by one of the People, New York, pp. 268. In 1830, as chairman of committee on commerce, he made a *Report on Commerce and Navigation*, which was extensively circulated even in England; in this he strongly condemns the commercial policy of the preceding fifteen years; in 1838, from the Committee on Ways and Means, he made a *Report on the Currency, National Bank, Independent Treasury*, in which he argued for the separation of the banking and fiscal operations of the government. D. R. D.

CAMERALISTIC SCIENCE (*Kameralwissenschaft*). So called because in the progress of time the private chamber of the king became the treasury, and the *camerarius* assumed a new and fiscal importance. Strictly speaking, the science treats of the adaptation of means to ends, and the effects of expenditure on the fund of wealth from which revenue can be drawn. Thus

it is nearly equivalent to "Science of Finance." There can be no doubt that in the 18th century the term was applied to a subject which might have been perfectly described by the latter phrase. There are, however, two reasons for treating them as separate and distinct. While writers on FINANCE (*q.v.*) generally treat of the national revenue and expenditure from an isolated point of view, the cameralistic writers considered the financial as but a part of entire economic science. Thus we are entitled to speak of cameralistic as well as of financial *science*. In the second place *finance* is frequently used as almost if not quite synonymous with taxation. The distinctions thus drawn are not, however, unexceptionable. Many treatises on cameralistic science are in point of fact treatises on the art of taxation, while on the other hand such a work as RICARDO'S *Principles of Political Economy and Taxation*, despite its incomplete nature, belongs in great part to the department of cameralistic science. (Another branch of this subject may be studied under COMMERCIAL SCIENCE, *q.v.*)

[Good examples of treatises on *Kameralwissenschaft* in its early sense as related to other branches of *Volkswirthschaft* or more generally, *Wirthschaftlicheswissen* are furnished in Baumstark (Edward), *Kameral, etc., Encyclopädie*, and Rau (C. D.), *Ueber die Kameralwissenschaft*; while for its more matured form the works of Rau, Wagner, and Leroy Beaulieu should be studied.] E. C. K. G.

CAMERARIUS, JOACHIM (born 1500, died 1574), an eminent scholar and "humanist," the friend of MELANCHTHON, the "glory of the German name" according to the learned Casaubon, deserves notice here as the author of a history of Greek and Roman money; and as having combated the mediæval prejudice against the payment of interest (see AQUINAS). "Why," he asks, "should you not pay for the use of money as well as for the use of a house?"

Historia rei Nummariæ sive De Numismatis Græcis et Latinis, in the ninth volume of Gronovius's *Thesaurus Græcarum Antiquitatum*. Another work on an economic subject was *Politicorum et Œconomicorum Aristotelis interpretationes et explicationes*, 1581. F. Y. E.

CAMPANELLA, TOMMASO (1568-1639), (a Dominican, born in Calabria), a much persecuted philosopher, wrote among many other works, *Civitas Solis*, an "idea of a philosophical republic," resembling the Platonic republic in the community of wives and goods, and in many other features, but not in slavery. In the city of the Sun "no one thinks it lowering to wait at table or to work in the kitchen or fields. While duty and work are distributed among all, each one has only to work about four hours a day." The remaining hours are spent in pleasant mental and bodily exercises. Commerce plays a small part in the simple economics of the Solarians. Money, given in exchange for foreign goods is not received.

[*Civitas Solis*, begun in 1602 (during the author's imprisonment), was published as part of *Realis Philosophiæ Epilogisticæ partes quatuor*, Frankfort, 1623.—*Fra Tommaso Campanella . . .* Luigi Amabile, 1887.—*Thomas Campanella . . .* Ernest Nys, 1889. Abstract in Jowett's *Republic*, Preface. An English translation in Morley's Universal Library, Routledge.] F. Y. E.

CAMPOMANES, PEDRO RODRIGUEZ, Count of (1723-1802), an eminent Spanish jurist, economist, and statesman. As a member of the group of enlightened ministers who gave lustre to the reign of Charles III., he laboured for the reform of taxation, the promotion of agriculture and manufactures, the diffusion of education, and the adaptation of Spanish institutions to the needs of the age. Eminently upright and disinterested, he was one of the foremost benefactors of his country. His theoretic views and practical efforts strikingly resemble those of his illustrious contemporary TURGOT.

The principal economic writings of Campomanes are:—*Respuesta fiscal sobre abolir la tasa y establecer el comercio de granos*, 1764.—*Discurso sobre el fomento de industria popolar*, 1774, and *Discurso sobre la educacion de los artesanos y su fomento*, 1775. Robertson eulogises the two latter works in his *History of America* (note 193), and justly says of Campomanes—"There are not many authors who have united more happily the calm researches of philosophy with the ardent zeal of a public-spirited citizen." J. K. I.

CANALS* may be defined as artificial waterways constructed for the purpose of navigation or irrigation. Navigable canals may be divided into two classes: (1) those used for inland navigation, and (2) those used to shorten sea voyages. The former have been constructed to carry boats and barges limited on the smaller canals to a carrying capacity of 25 to 30 tons, and on the larger canals to a capacity of from 50 to 300 tons. In the case of the Amsterdam and Manchester ship canals, a successful attempt has been made to construct a waterway of sufficient size to permit of the passage of large sea-going vessels. The chief examples of the second class are the Panama Canal, Suez Canal, Languedoc Canal, and Caledonian Canal. Though known in Egypt and China, and constructed in Holland in the 12th century, it was not until the invention of locks in Italy in the 14th century that inland navigation made any progress in Europe. The development of canals in Holland greatly extended that country's commerce, as by their means a large inland trade was carried on with Germany and France. Several important canals are found in France towards the end of the 17th century, but in England the first modern canal was not authorised until 1755. Five years later the Duke of Bridgwater obtained his first Canal Act, and the success attending the construction of the canal from Worsley to Manchester gave such an impulse to such undertakings that PORTER (*Progress of the Nation*, § iii. ch. i., 1836-1843)

pointed out that, owing to the construction of canals, there was no spot south of the county of Durham at a greater distance than fifteen miles from water conveyance. It was expected that canals would prove formidable rivals to railways, but in 1845 began the gradual transfer of canals to railway companies. This transfer was in some cases due to the dread that railways would secure all the traffic, and the withdrawal of opposition to the construction of the railway was secured by the purchase of the canal. In other cases the railways offered tempting terms so as to secure a monopoly of traffic. The result was that about one-third the inland navigable canals are controlled by railway companies (see *Report of Royal Commission*, 1906-10). Some canals have been closed or allowed to fall out of repair, on others heavy tolls called "bar tolls" have been imposed to prevent their use by traffic from neighbouring canals, whilst no adequate attempt has been made to establish through communication or speedy service (see *Report of Committee on Railways*, 1882). In 1872 a joint committee of the House of Lords and of the House of Commons recommended that no internal navigation in the hands of the public should be placed under a railway company, and in 1882 a select committee of the House of Commons on railways expressed the opinion that it was "impolitic that railway companies should have the control either directly or indirectly of canal navigation, and that where canals are already under the control of railway companies, parliament should endeavour to ensure their use to the fullest possible extent."

The advantages of canals over railways have been summed up by L. F. Harcourt in his treatise on *Rivers and Canals* (Oxford, 1882), as follows—"They are frequently less costly in construction, and their cost of maintenance and their working expenses are considerably smaller. Moreover, the proportion of dead weight to the load carried is much less in canal barges than in railway waggons; and the barges not only cost much less proportionately to their capacity than waggons, but are also far more easily repaired. The resistance also to traction is much smaller in water than on rails, amounting, according to M. Malézieux, to only one-fifth of the average resistance on railways. Barges on canals can be loaded or unloaded at any places they pass; whilst goods trains can only stop at stations." See also the *Evidence given before the Committees on the Manchester ship canal*, 1883, 1884, 1885, and *Canals* by M. Stevens (London, 1887).

[On the economic aspects of canals reference may be made to *Observations sur les tarifs de nos canaux*, F. Aulagnier, 1837.—*Observations on Canals and Navigable Rivers*, G. Beadon, 1848.—*Le Canal Indo-Européen et la navigation de l'Euphrate et du Tigre*, E. Ende, 1886.—*Kanale und Eisenbahnen in ihrer wirthschaftlichen Bedeutung*, C. Hauser, 1880.—*Des Canaux de Navigation*, M. La Lande, 1778.—*Die Canalisation des preussischen Staates nebst Beweis*, Z. Puttkammer, 1868.—*Canal und Eisenbahn*, Reimherr, 1884.—*Canals*, by M. Stevens, London, 1887.—*Eisenbahn oder Kanal*, E. Wiss, 1878.—*Ueber die Kanalbahn und deren Rentabilitat in der Eisenbahnzeit*, E. Wiss, 1866.—*Die selbstartende Eisenbahn Transporte und die Wasserstrassenfrage*, L. Zells, 1887.—*Ueber Wasserstrassen*, L. Zells, 1887.—*Waterways and Water Transport*, by J. S. Jeans, London, 1890.

The relative advantages of railways and waterways in Germany are discussed in the *Journal of the Royal Statistical Society*, vol. li. 1888. As regards the canal system of different countries, see as to English Canals, *History of Inland Navigation*, by J. Phillips, London, 1803.—*Historical Account of the Navigable Rivers, Canals, and Railways throughout Great Britain*, by J. Priestley, London, 1831.—*Reports, Evidence, and Returns, Royal Commission on Canals and Waterways*, 1906. Their final Report received much attention, followed, about 1912, by the establishment of the Midland Waterway's Association to press for improved water communication with Hull, Liverpool, London and the Severn Ports. As to France: *Histoire de la Navigation intérieure de la France*, par M. Dutens.—*Les Voies navigables en France*, par P. Muller, 1866.—*Manuel des Voies navigables de la France*, par A. Larme, 1878. As to Germany and Austria: *Die Kanal-Verbindung des Rheines mit der Donau*, C. T. Kleinschrod.—*Deutschlands Wasserstrassen in deren Verwendung in ihrem jetzigen Zustande für den Export*, von W. J. Mulvany, 1881.—*Vienne port de mer, Traité de l'exploitation des Voies comprises d'Autriche et de l'Allemagne. Le Grand Danube*, par Saint Hubert, 1881. As to Holland: *Nederland als Polderland*, A. A. Beckman, Zutphen, 1838.—*Le Canal d'Amsterdam à la mer du Nord*, C. Boissay, 1871. As to United States: *Die Wasserstrassen in den Vereinigten Staaten von Amerika in ihrer commerziellen und industriellen Bedeutung*, C. Mosler, 1877.] J. E. C. M.

CANARD, Nicholas François, professor of mathematics at the Collège de Moulins (*b.* about 1750, *d.* 1833). He was the author of *Principes d'Économie Politique*, Paris, 1802, crowned by the French Academy. "Ces prétendus principes," says Cournot, "sont si radicalement faux, et l'application en est tellement erronée, que le suffrage d'un corps éminent n'a pu préserver l'ouvrage de l'oubli."

Canard also wrote *Mémoires sur les causes qui produisent la stagnation et le décroissement du commerce en France, et qui tendent à anéantir l'industrie commerciale; moyen simple de les faire cesser*, Paris, 1826.

[Canard is criticised by M. Bertrand, *Journal des Savants*, 1883, p. 499.] F. Y. E.

CANCEL, Cancellation. The discharge of a document, usually by marking across the operative signature, or signatures, either the word "cancelled" or some recognised mark. "The cancellation of a signature operates as a

discharge, unless proof can be given that the cancellation was done by mistake."

[Hutchison, *The Practice of Banking*, vol. i. p. 125.]

CANCRIN, GEORGE (1774-1845), an eminent Russian financier, son of Franz Ludwig Cancrin, the distinguished German mineralogist. Born at Hanau in Electoral Hesse, he studied law and political economy at the universities of Giessen and Marburg, and early showed a remarkable faculty for work and a spirit of restless activity. He filled successively several posts in the administration of Anhalt-Bernburg. He joined his father in Russia, 1796. In 1800 he was employed in the ministry of the interior, and, having attracted attention by writings on military economy, he was made, 1812, intendant-general of the army of the West, and in that capacity accompanied the Russian forces in their march through Germany. In 1813 he was appointed intendant-general of all the "active" armies. This office he resigned in 1820, and in 1823 became minister of finance, a position which he held till 1844. He possessed in a high degree the esteem and confidence of the Emperor Alexander, as well as of his successor. He was most diligent and energetic in discharging his ministerial duties, founded many useful establishments, and gave a great impulse to the national industries. He had special agents at Paris, at London, and in Germany, who kept him informed on the progress of the arts and the introduction of new processes. By his financial management he increased the revenue, and raised the credit of the empire, previously on the verge of bankruptcy. But his system, though successful in providing resources for the government, was founded on rigid prohibition and state-manufactures, and appears to have been burdensome to the community. His term of office, we are told, is now regarded by the Russian people as the most unfortunate period of their history. He died at St. Petersburg in 1845. ROSCHER thinks his general economics were injured by his pre-occupation with the question of military supply, immediate results being aimed at in the latter case, whilst in the conduct of national affairs as a whole permanent prosperity is the object to be achieved. He represented a reaction against Adam SMITH from the point of view of a man of the world who had to conduct the economic practice of a country much less advanced than England, in fact, as he himself calls it, "infra-European." Strictly conservative in his economics, he disliked new institutions, being thus sometimes led to paradoxical conclusions; he opposed, *e.g.* the establishment of banks and the extension of railways, at least in Russia. (Roscher, *Geschichte der Nat. Oek. in Deutschland*, p. 813.)

Cancrin was author, besides minor publications, of a treatise *Ueber die Militärökonomie im Frieden und im Kriege, und über ihr Wechselverhältniss zu den Operationen*, 1820-23, of *Weltreichthum, National-Reichthum und Staatswirthschaft, oder Versuch neuer Ansichten der politischen Oekonomie* (published anonymously), 1821, and *Die Oekonomie der menschlichen Gesellschaften und des Finanzwesen, von einem ehemaligen Finanzminister*, 1845.

J. K. I.

CANDAREEN. A denomination of the Chinese money of account, but not a coin. 10 cash = 1 candareen (see CASH). 10 candareens = 1 mace. 10 mace = 1 tael (the unit of value).

F. E. A.

CANNING, GEORGE, born in Marylebone, 1770, died at Chiswick, 1827, is most famous for the unique services which he rendered as foreign secretary, especially in the autumn of 1807, when he directed the capture of the Danish fleet, and in 1822 and 1826, when he stood firm against France and the Holy Alliance in the affairs of Spain and Portugal. His "Needy Knife Grinder" and other witty papers in the *Anti-Jacobin* have given him a place of his own in our minor literature. In economical history his place is subordinate. His first views of commercial policy inclined him to compromise. Though he was not a profound student of finance and political economy, his close alliance with HUSKISSON counteracted his own shortcomings, and justifies his inclusion among the pioneers of a free-trade policy. His utterances on the bullion controversy, the CORN LAWS, and the navigation acts, had a distinct influence on the public as well as on the House of Commons.

When the Report of the Bullion Committee came up for discussion, May 1811, Canning as a private member gave (in two speeches—8th May and 13th May) a general support to the resolutions of the committee, though he refused to vote for the sixteenth (or last) which pledged the bank to resume cash payments in two years' time. VANSITTART and PERCEVAL had urged that continued suspension of cash payments was necessary to the successful prosecution of the war with France. Canning answered that our best strength was to support the credit of the country, and the soundness of the currency. There must be no uncertainty in the public mind as to the real standard of the currency. The question of depreciation was a question not of the soundness of the bank itself but of the relation of the notes of the bank to the real standard, which Canning defined (as PEEL afterwards defined it) as a definite measurable quantity of the metal gold, of a certain ascertainable fineness. Vansittart had talked of the standard as being a "sense of value," or as "public estimation"; and Canning had no difficulty in showing the vagueness of these phrases, and, contrariwise, the clearness of the terms employed by the bullion committee, who had been slighted as "abstract theorists," only because in addition to practical knowledge they

had acquaintance with first principles. They were right in finding a sufficient proof of depreciation in the fact that there was a difference between the price of BULLION in bank notes, and the MINT PRICE of gold; and it was an important confirmation, to find the exchanges continuing for some time progressively unfavourable to this country. It seemed to Canning (as to COBBETT) that BURKE's description (1791) of the contrast between English notes and French ASSIGNATS can fairly be applied to the contrast between English notes as they were in Burke's time, and English notes as they were in 1811. The resolutions, introduced by Vansittart, though not of Vansittart's own invention (see Canning's Speech on Bank Charter Act, 13th Feb. 1826), in opposition to those of the bullion committee, called forth all the resources of Canning's wit and sarcasm, especially the famous third resolution that the bank notes "have hitherto been and are at this time held in public estimation to be equivalent to the legal coin of the realm." He compares this to Bonaparte's proclamation that beet and maple sugar are infinitely better than cane sugar, and must, therefore, be used in place thereof, under penalties. These two speeches of 1811 are striking examples of Canning's power to master at second hand the principles of a subject to which he does not appear either then or afterwards to have given any special study. In the *Quarterly Review* (Nov. 1810 and Feb. 1811, dealing with two pamphlets of Sir John SINCLAIR) he treats the same subject (of the bullion committee) in his lighter vein (see BULLION COMMITTEE, REPORT OF; CURRENCY THEORY, etc.) He had to deal with a kindred topic (in his speech of 13th Feb. 1826) when the government were taking steps to stop the circulation in England of bank notes under five pounds; but except perhaps for a telling quotation from a private letter of Burke's ("If Pitt consents to the issue of one pound notes he will never see a guinea again") the speech is not of special importance.

In office along with Huskisson in 1823 and 1826, he gave willing and admiring support to the reforms in commercial policy introduced by his colleague. It was in the negotiations for a reciprocity treaty with Holland, in amendment of the navigation acts, that he sent (in 1826) in answer to Falck, the Dutch minister at the Hague, the well-known despatch in cipher:

"In matters of commerce the fault of the Dutch
Is giving too little and asking too much;
With equal advantage the French are content,
So we'll clap on Dutch bottoms just twenty per cent.
(Chorus.) Twenty per cent. Twenty per cent.
Nous frapperons Falck avec twenty per cent."

In 1827 he helped Huskisson to frame a sliding scale of duties, in amendment of the corn laws of 1815 and 1822 (see CORN LAWS and SLIDING SCALE). His policy here, as well as in the case of West Indian slavery (see speeches of 1823, 1824, and 1826), was that of compromise and gradual reform. He admitted in 1827 (speech of 1st March) that the paternal power he had claimed, in 1826, for government, to relax the corn laws and open the ports on emergency, had not proved to work well in practice, and the confession was one sign amongst many that he was inclining towards a policy opposed to all interference of government with trade. His single budget speech, 1st June 1827 (when he was at once prime minister and chancellor of the exchequer), cannot fairly be taken as a measure of his financial ability, for the circumstances were exceptional, and the budget a makeshift. His conception of the relation of economics to politics may be gathered from his short speech in defence of Huskisson against the silk manufacturers (24th Feb. 1826): "We must deal with the affairs of men on abstract principles, modified, however, of course, according to time and circumstances;" we must soar to "the heights from which alone extended views of human nature can be taken." He was careful to point out that reform of commercial policy had been hitherto identified with neither political party; it was his master, PITT, who carried the treaty of commerce with France in 1786, when Fox opposed it.

[*The Speeches of the Right Hon. George Canning, with a Memoir of his Life*, by R. Therry, 6 vols., 1828.—*The Life of the Right Hon. George Canning*, by R. Bell, 1846.—*George Canning and his Times*, by A. G. Stapleton, 1859.—*Statesmen of the Time of George III.*, Henry, Lord Brougham, 1839-43.]

J. B.

CANON LAW. The canon law is a body of rules (*κανόνες*) laid down by the early and mediæval Christian church for the government of its members. It consists accordingly of citations from scripture, the fathers, and the popes, together with commentaries and glosses. The several compilations of this character, beginning at the end of the 3d century and carried down to his own day, were reduced to something like their present systematic shape (in the "corpus juris canonici") in the middle of the 12th century by Gratian, a monk of Bologna, the founder of the study of canon law. His successors appended to his collection (or "Decretum") the decretals of the popes in the next three centuries. It need hardly be said that only such of its topics as bear on economical theory or history will be considered here.

At the beginning of the book we are told that the human race is under two kinds of laws,—the law of nature and the law of custom (or positive institution) "naturali jure et moribus." Civil law and canon law are two

branches of the second species. By the law of nature there is no private property, but "all things are common to all men" ("jure naturali omnia sunt communia omnibus"), as they were among the first disciples. St. Augustine argues that, as "the earth is the *Lord's* and the fulness thereof," private property is not of divine but of purely human appointment. "Tolle jura imperatorum," and no one can say "this is my house," or "this is my slave," etc. It would seem natural after this to hear that private property is forbidden by canon law; but this is not so. It is forbidden to the *clergy*, who are to hold their property collectively for the good of the poor; they are not to marry; and they are to be "victu et vestitu contenti." But it is allowed, grudgingly, to the laity, who are to hold it in trust for the poor, and who are therefore to give liberally to the poor and to the clergy as the almoners of the poor. It is hinted that among Christians the ideal distribution is community of goods, and that only for the hardness of men's hearts is any compromise admitted. In the same way the ideal industry is agriculture; and the only right way of increasing wealth is to till the ground and breed cattle. These pursuits and the simple manufacturing industries of an agricultural people are allowed with reservations even to the clergy, who may thus work for their own livelihood, like the apostles. Labour within these limits is indeed commended by the canon law; and it is one of the glories of the early and mediæval church that it did its best to enfranchise the labourer. ROMAN LAW had more regard for property than for human beings; canon law erred on the safer side. In their aspirations after an idyllic life it is clear that the writers would have gone back to barter if they dared. As it was they followed ARISTOTLE in treating money as a "barren metal," and they gave literal effect to the words of the gospel: "Lend, hoping for nothing again" ("Mutuum date nihil inde sperantes"), by strictly forbidding usury and by giving every assistance to the debtor as presumably poorer than the creditor. At first (by the council of Nicæa, 325 A.D.) the prohibition of USURY applied only to the clergy; but a century later it was extended to the laity, and the "corpus juris canonici" abounds in emphatic assertions of it. "Etiam laicis usura damnabilis." "Usura" did not simply mean a high rate of INTEREST; it meant all and every interest whatever, and the notion was even stretched so as to embrace all and every gain beyond what was considered a just and proper price, in ordinary buying and selling. "Qui plus quam dederit accipit, usuras expetit," whether the "superabundantia" be money or wheat or wine. "Quidquid sorti accedit, usura est." "Turpe lucrum sequitur qui minus emit ut plus vendat." "Rapinam facit qui usuram accipit." As late as the 14th century (at the Council of Vienne, 1311) Clement V. declared the prohibition of usury to be absolute, all civil laws to the contrary notwithstanding. Dante puts the usurers in the lowest division of his seventh circle of Hell as doing violence to God and nature (*Inferno* XI., 46-50, cp. 95-111). Thomas AQUINAS (in 13th century) speaks of usury as "contra legem naturæ," as well as against the law of the church; and this unnaturalness had been one of the grounds of prohibition from the first. Usury might be practised only as a form of war, "Ubi jus belli, ibi etiam jus usuræ."

"If thou wilt lend this money, lend it not
As to thy friends,—for when did friendship take
A breed for barren metal of his friend?—
But lend it rather to thine enemy."

The arguments by which the unnaturalness of interest was maintained ran somewhat as follows: When money is lent, the lender parts with it, and the borrower has it to use; if there *were* any productiveness in it, the man who has used it, and not the man who has parted with it, would justly have the benefit. There is, however, no productiveness in it. The lender gives, say, ten pieces of silver; now these ten pieces are not like seeds in the earth, or trees in the orchard; they do not become anything else than ten pieces of silver, through however many hands they pass. Why then should they become eleven or twelve when delivered again to the lender?

Again, it was said, we must distinguish two kinds of loans. There are objects which, when we have borrowed (or hired), we use without destroying them in the use—*e.g.* a field, or a horse, or a spade. We return them not "in genere," but specifically, in their identity, with compensation to the lender for any deterioration we may have caused. This loan is the COMMODATUM of Roman law, as distinguished from MUTUUM. In the latter instance ("mutuum"), as in the case of fruit or wine, the borrowed objects are destroyed in the using, and are returned to the lender in kind. Now, money is of the latter sort; it has no "use" which is distinct from itself, and consistent with its retention by the possessor; to use it, he must part with it. But, if we allow usury, we are claiming that money *has* a use distinct from itself, and that, when the sum borrowed is returned, an additional sum should be added in payment of this supposed use,—in other words "id venditur quod non est." Of the other arguments used against usury by the canonists, it will be enough to cite perhaps the most famous one. To pay interest is to pay for time. Now time is the common property of all men; and, besides, time is like barren metal itself; it can of itself produce nothing; why then should anything be paid for it? Thomas Aquinas laid special stress on this argument, which he was

the first distinctly to formulate. It does not appear very explicitly in the canon law itself.

The motive for the prohibition is clearer than the arguments advanced for it. It is the same motive which led the church to forbid a man in any case to take advantage of his neighbour's need, and wring from him an exceptionally high price. Christian brotherliness required that my neighbour's extremity should never be my opportunity, and I should never charge him more than the fair price JUSTUM PRETIUM for my goods, the said price being the one assessed in money by the church or (it might be) by the civil authorities, and ratified as customary. The same principle would prevent me from exacting any recompense for a loan. Otherwise, in either case, I should be receiving what I had not earned by the sweat of my brow, and violating the law of God and nature.

The European world, with settled order and increasing commerce, chafed under this enforced unselfishness; and the church was forced to tolerate evasions of the prohibition of usury. These evasions will be more fully treated under the head of usury; but the chief instances may be mentioned here. The buyer on credit was allowed to pay more (in the final settlement) for his article than the buyer for cash, in all cases where, in the first instance, there had been a real uncertainty from ordinary causes about the future price of the article concerned. But it was to be clearly understood that the difference in time was to have nothing to do with the difference in the price (decretal of Alexander III. in 12th century, confirmed by Gregory IX. in 13th century).

This was a comparatively early concession made to the Genoese when Italian commerce was beginning to grow, after the first crusades. It was followed by others. It was found possible, for example, to exclude the BILL OF EXCHANGE from the category of usury by representing any DISCOUNT or INTEREST it involved as a payment for work done, namely, the work of transporting money (or at least the payment of money) from one place to another. Though money by itself was (to the canon law) unproductive, "money conjoined with human labour" ("pecunia juncta cum hominis operatione") could be productive. Accordingly, when companies were formed some of whose members contributed money and labour, others only their money, yet all shared in the gains, it was allowed (not without misgivings) that this conformity to the letter of the law was sufficient.

A third kind of exception was made in cases where loans were attended with unusual risks to repayment; the lenders were allowed to receive a sum over and above their principal as a compensation for the risk they had run. This concession was very grudgingly made; but (as Hallam has noticed) marine INSURANCE seems from the first to have passed unchallenged. Not unlike these cases was that of creditors whose debtors were behind their time; interest in such a case was counted a justifiable penalty for breach of contract ("usura punitoria").

Finally, the Jews were allowed to lend money at interest, because, not being Christians, they were not bound by canon law. There were always some canonists who (like Aquinas) objected to this toleration; but its practical convenience saved it; and, till the LOMBARD money-lenders became their competitors, the Jews had the monopoly of nearly all the credit transactions that could not be brought within the letter of the canon law. Communities of lax Christians, like the traders of Genoa and Cahors, seemed to have imperilled their orthodoxy to gain similar advantages.

The church itself, especially in the later centuries, found reason to relax its prohibition of usury where its own material interests were seriously involved. The sale of offices, for example, such as those of chamberlain and treasurer in the papal court, realised a higher price when purchasers were allowed to club together to bid for them; the result was, however, that many of those joint purchasers, who had no intention of holding the offices themselves, shared in the revenues in a way indistinguishable from the receiving of interest on capital invested. Again, the sale of land for a fixed yearly ground rent ("census consignatorius"), instead of a sum paid down once for all, was conceded, on the subterfuge that, not the yearly income, but the right to the yearly income was the subject matter of the sale. Pius V. (in the 16th century) decided that such arrangements were not unlawful, provided that they related to land only, and were strictly determined by the actual yearly produce of it. Had he decided otherwise, the revenues of large numbers of religious houses, especially in Germany, would have been seriously affected.

But in the toleration of the "montes pietatis" (which date from the 15th century), both the letter and the spirit of the older canon law were violated. These institutions were formed by the joint subscriptions and donations of philanthropic Christians; and they were simply banks which advanced money to the poor at interest. This interest was represented as simply a "recompense" for the trouble of managing the institutions that advanced the money, and thus the obnoxious name of usury was avoided, though the fact was certainly present. Besides, the "montes," to attract subscriptions, gave interest on the sums subscribed, and thus became simply an investment for capital. There were also "montes profani," secular banks, founded on their model, but without their charitable object, and dealing with ordinary men of business. But even the "montes pro-

fani" escaped condemnation; it was held that they were of service, if not to the poor, at least to the public, and the interest they gave on investments represented a LUCRUM CESSANS, or loss which the investors were presumed to have incurred by withdrawing their money from trade and putting it into these banks. When "usury" had been tolerated in the case of these societies, it could not be long before the like concession would be made in the case of individuals (see articles FATHERS, THE; MONTS DE PIÉTÉ.)

[*Corpus Juris Canonic.*, ed. E. L. Richter, large 4to, Leipzig (Tauchnitz), 1839. The chief passages relating to usury begin on pp. 147 and 630. In the companion volume containing the decretals of Pope Gregory IX., etc., see especially pp. 782, 1017, 1101.—The edition of E. Friedberg is considered by some to have superseded Richter's.—*Die Nationalökonomische Grundsätze der canonistischen Lehre*, Dr. W. Endemann (Jena), 1863, the most complete monograph on this subject.—*Geschichte der National-Oekonomik in Deutschland* (see *Einleitung*), W. Roscher (München), 1874.—*Geschichte der volkswirthschaftlichen Literatur im Mittelalter*, Dr. H. Contzen (Leipzig), 1869. The same author has also published *Zur Würdigung des Mittelalters* (Cassel), 1870, and *De Thomae Aquinatis Sententiis ad Oecon. Politicam pertinentibus* (Basel), 1861.—*Das deutsche Genossenschaftsrecht*, vol. iii. *Staats- und Korporationslehre des Alterthums und des Mittelalters*. Dr. Otto Gierke (Berlin), 1881.—*Geschichte und Kritik der Kapitalzinstheorieen* (ch. ii.) Dr. Böhm Bawerk (Innsbruck) 1884.—*Neue Untersuchung der Nat. Oek. und der natürl. Volkswirthschaftsordnung*, J. Schön (Stuttgart), 1835.—*Economia politica del medio evo*, L. Cibrario, 1839.—*History and Future of Interest and Profit*, Cliffe Leslie (Fortnightly Review, November 1881). *History of Political Economy*, J. K. Ingram (London), 1888. *Introduction to English Economic History and Theory*, vol. i.—(*The Middle Ages*), W. J. Ashley (London and New York), 1888.] J. B.

CANTALUPO, DOMENICO, a Neapolitan, author of a very successful essay on the corn trade, published in 1783 at Palermo. The third edition was published in Nice and Genoa in 1795, and the fourth edition by CUSTODI in his *Economisti classici Italiani*. Cantalupo strenuously recommends free trade, full, sure, and equal liberty for all, and traces the history of corn laws from the times of King Ladislaus (1400) down to his own times to prove the bad effects which a restrictive system always produced. M. P.

CANTILLON, PHILIP, author of "*The Analysis of Trade, Commerce, Coin, Bullion, Banks, and Foreign Exchanges: . . .* Taken chiefly from a Manuscript of a very ingenious Gentleman deceas'd, and adapted to the present situation of our Trade and Commerce. By Philip Cantillon, late of the City of London, Merchant, London, 1759." 215 pp. 8vo. This Philip was the eldest son of James Cantillon of the city of Limerick, who was first cousin of Richard CANTILLON, author of the *Essai sur la Nature du Commerce*. Philip carried on a banking business with David Cantillon at Warnford Court, Throgmorton Street, London, at least as early as 1725. In 1738 he was a director of the Royal Exchange Assurance: in 1742 became bankrupt: in 1747 was trading alone as insurance agent and policy broker: in 1753 was partner with one Thomas Mannock in the same business: and in 1759 had retired. He married, 14th July 1733, Rebecca, daughter of William Newland of Gatton, Surrey, by whom he had two daughters. There is reason to think that he was engaged for a short time at Richard Cantillon's bank in Paris, but that his litigious character made him unamiable and brought about his speedy return. On the death of Richard, Philip intervened in the management of his estate, and thus obtained possession of several papers, including probably the English manuscript of the *Essay*, which professedly served as the groundwork of the *Analysis of Trade*. He must, however, have mutilated the manuscript almost beyond recognition. Much of the closely packed original is omitted, and much is replaced by vague and general summaries, most unskilfully made, with the result that little indeed of the *Analysis* fairly represents the views of Richard Cantillon. Philip added a preface on the history and importance of commerce, some strictures upon close corporations, new matter on inland and foreign trade, bankers and banks, and exchanges, interspersed with quotations from HUME'S *Essays*, and from *The Universal Merchant*, etc. (see N. MAGENS), concluding with a criticism of the law relating to bills of exchange.

The book was reviewed in the *Monthly Review* or *Literary Journal* for April 1759, London, vol. xx. 309. Sir James STEUART (Works, ed. 1805, iii. 22) says, "Mr. Cantillon, in his *Analysis of Trade*, which I suppose he understood by practice as well as by theory, has the following passage," etc.

"A small treatise of Arithmetic," explaining the foreign exchanges "vulgarly and decimally" without "unintelligible jargon," was designed by the author of the *Analysis* (p. 85), but does not seem to have ever been published. H. H.

CANTILLON, RICHARD. The economic repute of Cantillon, for a time completely obscured by the glory of Adam SMITH, can never have rested upon the popularity of his little book, now one of the scarcest works in economic literature. For GOURNAY had to exercise his great personal influence to persuade his disciples not to neglect it as others were doing. And the elder MIRABEAU, himself an adept in the craft of popular writing, deplores, and accounts for, the failure of the book as due to the defects of its style and the aridity of its subject. The perverted *Analysis of Trade* (see PHILIP CANTILLON), sometimes confused with it, probably conduced to its disrepute. On the other hand it was thought worth while

to reprint it at least twice within a year of its publication. And the references to it in so widely-read a book as *L'Ami des Hommes* must have made known the name of Cantillon to many who never saw his *Essai*.

The influence of the book is evidenced not by the number but by the distinction of its students, including Gournay, Quesnay, Mirabeau, Turgot, and Adam Smith. It gave birth to Mirabeau's *L'Ami des Hommes* and apparently suggested much of the *Tableau Œconomique* of Quesnay and parts of the *Wealth of Nations*. It was, however—perhaps because of its concise style—much misrepresented and misunderstood. Cantillon avoided, as Jevons has pointed out, the one-sidedness of the Physiocrats; and yet has been marked out as a Physiocrat. He was declared by Mirabeau to hold the doctrine that population is the source of riches, though, in Jevons's opinion again, he anticipated in condensed form the celebrated essay of Malthus. And Adam Smith loftily imputed to him an attempt to form exact estimates in matters where Cantillon expressly disclaimed any such pretension.

The importance of the book in the history of the development of economic science may be best indicated by a short analysis of its contents. It consists of three parts. Part I. opens by defining Wealth and resolving it into the elements Land and Labour, explains the "natural" formation of societies and social classes, villages, towns, cities, and capitals; the "natural" variations of Wages in different employments (due to time, expense and difficulty of learning, risk in work, capacity and trust required); the "natural" adjustment of Supply of labour to Demand; contrast between real or intrinsic (normal) value, and market value—the first depending upon cost of production, the second upon supply and demand; the equation between land and labour; the minimum wage for family maintenance: the diffusion of wealth through the agency of the landed classes; conduct of European commerce by employers at a venture (robbers, beggars, artists, lawyers, etc., employers of their own labour); wages certain, profits uncertain; changes of demand (Fashion); population adjusts itself to the means of subsistence; labour the "natural" riches of a state: gold and silver convenient for money because useful, beautiful, durable, portable, divisible, easily transported and guarded, cognoscible, indestructible by fire, of equal goodness, not too cheaply produced, etc.

Part II. treats of Barter; market prices; circulation of money in mass and rapidity; how much money does a country require? increased and decreased currency; effects of appreciation on fixed contracts and wages; Credit; Interest, its causes, rise and fall of rate, not dependent upon scarcity or abundance of money.

Part III. deals with foreign trade; Foreign Exchanges; variations in relative value of monetary metals; alterations of coinage; Banks; national banks; reserves; guarantees; banking and credit.

The lost supplement included a precise and comparative account of the economic condition of the workmen of Europe as reflected in their expenses—much, apparently, upon the lines of Le Play's great work exactly one hundred years later (*Les Ouvriers Européens*, 1855). It described the actual diffusion of a large income; minutely analysed the cost of production of certain articles through their several component elements, etc. etc.

The execution of this ample programme is no less remarkable than its conception. Jevons thought Cantillon wrote "with the scientific precision of a Cairnes or a Cournot," and Prof. Marshall refers to his "thoroughly scientific manner" of discussion (*Prin.* vol. i. p. 593 *n.*) At once terse and subtle, he united close observation of concrete fact with keen deductive power. To consumption and demand he assigned an importance not generally recognised till much later. And his beautiful examples of accurate reasoning were rendered tedious to his contemporaries by very reason of his careful limitations and guarded hypotheses. The indirect influence of the book is difficult to trace. In France the *Essai* has been pretty continuously read (see *e.g.* Ganilh, *Des Systèmes d'Économie Politique*, 2d ed. 1821, vol. i. pp. xv. 134; vol. ii. p. 107), and so stimulating and suggestive does it remain that its direct influence may be found to be not yet exhausted.

Essai sur la Nature du Commerce en général traduit de l'anglois. A Londres, chez Fletcher Gyles; dans Holborn, *M.DCC.LV.* (being reprinted for Harvard University, 1891). H. H.

Cantillon enunciates most of the leading principles of political economy relating to supply and demand, normal value, the rôle of the Entrepreneur, population, currency, banking, and other important subjects. But it will be found that the statements often involve ideas peculiar to the writer, or the age; in particular, his difficult definition of value as regulated by quantity of land as well as of labour. The similarities between Cantillon's views and those now received are not more instructive than the differences. A full analysis of Cantillon's work, and an extreme estimate of its importance, will be found in Jevons's article on "Richard Cantillon and the Nationality of Political Economy," in the *Contemporary Review*, 1881. In *Investigations in Currency and Finance*, Jevons discusses Cantillon's remarks with respect to the statement on the ratio between gold and silver made by Newton. F. Y. E.

It has been a matter of some difficulty to explain the connection of Richard Cantillon's

Essai with Paris, where it was published, and the influence it had on contemporary French economic thought. The following additional particulars respecting his life may assist in the elucidation of these points.

1. *The Life of Cantillon.*—One Richard Cantillon, probably a cousin of the economist, is described in some documents in the Archives Nationales, at Paris (E 804, p. 157; E 913, p. 253, and E 1948, fol. 98), under dates 1706, 1709, and 1718, as a merchant and banker at Paris, Rue de l'arbre sec. Among his customers were Irish Catholics, and he was "Receveur général de la lotterie accordée à la Princesse d'Angleterre en faveur des religieuses Irlandaises transferées à Ypres." In August 1717, the ticketholders in that lottery petitioned to have their claims settled, the deceased Richard Cantillon (E 913, No. 253), having left only 68,200 livres of assets, and 310,000 livres of liabilities. Another document (Y. 11080) states that after the decease of one Thomas Cantillon, an Irishman, officer in the regiment of Lally, in 1764, his brother Jean and his father Philippe Cantillon claimed to be his heirs.

The will of Richard Cantillon, of St. George's, Hanover Square (the economist) (Somerset House, dated the 12th July 1732, and proved the 21st May 1735), shows that he had bought a house in Paris through the intervention of Edmund Gough, and he names Francis Garvan and Lord Viscount Micklethwaite (died 1734) as his executors. Another point relating to Cantillon's position is mentioned by Horace Walpole, who writes 25th April 1743, to Sir H. Mann: "Lord Stafford is come over to marry Miss Cantillon, a vast fortune, of his own religion. She is daughter of the Cantillon who was robbed and murdered, and had his house burned by his cook a few years ago" [1734] (*The Letters of Horace Walpole, Earl of Orford*, ed. by Peter Cunningham, 1857, vol. i. pp. 241, 242, 298, and the works of *Jonathan Swift*, ed. by Sir W. Scott, 1824, vol. xvi. p. 262, 263).

2. *His Works.*—There are three editions of the *Essai sur la nature du commerce en général*; one of 1755, 430 pp. besides *table des chapitres*; one of 1756, 427 pp. and that of 1756 in the *Discours Politiques de Mr. David Hume*, traduits de l'Anglois par M. de M., Amsterdam, vol. iii. pp. 153-428, 1756. It is significant that Turgot's translation of Josiah Tucker's *Reflections on the Expediency of a Law for the Naturalisation of Foreign Protestants*, 1751-52 (*Questions importantes sur le Commerce à l'occasion des oppositions au dernier Bill de Naturalisation*, etc.), bears the name of the same publisher: A Londres, chez Fletcher Gyles, dans Holborn, 1755. That Gournay studied Cantillon is clear, for of Gournay it is said that "il fit surtout lire beaucoup *l'Essai sur le commerce en général*, par Cantillon, ouvrage excellent qu'on négligeait" (*Mémoires inédits de l'Abbé Morellet*, t. i. pp. 37, 38, 1823). The work was highly praised by Mably, *Entretiens de Phocion*, p. 239, 1763: and by Graslin, *Essai analytique sur la Richesse et sur l'impôt*, Londres, p. 365, 1767. The most detailed account of its origin has been given by the Marquis of Mirabeau in his *Ami des Hommes*, vol. i. 1756. He holds Cantillon to be a Protestant (p. 58), professes to have adopted all his principles (p. 78), and frequently quotes passages of the *Essai* (pp. 34, 108, 115, 116, 171, 206). The seventh chapter too opens with a quotation and is followed by some details concerning its author. "He was," says Mirabeau, "without contradiction, the most clever man in these matters who ever existed. This work, one of a crowd of similar productions of the description then in fashion, is but the hundredth part of the writings of that ingenious man, which perished with him by a catastrophe both singular and fatal. This work itself is mutilated, for the *supplement* to which he often refers, and in which he had established all his calculations, is wanting. Cantillon himself had translated the first part for the use of one of his friends, and it was printed from this manuscript more than twenty years after the author's death" (pp. 237-239). In 1767 Mirabeau, expounding to Rousseau the ideas of the economists upon the subject of population, and refuting his own former opinions, contained in the *Ami des Hommes*, says, he had borrowed them exclusively from Cantillon, "whose work I had had since sixteen years in manuscript" (*i.e.* 1740). See also his *Philosophie Rurale*, Amsterdam, 1764, t. ii. ch. ix. pp. 141, 142. Mirabeau was shaken in his belief by Quesnay, who denied population to be the source of riches, and said "that Cantillon, as a political instructor, was a fool" (see *Rousseau, Ses amis et ses ennemis, correspondance publiée*, par M.G. Streckeisen-Moultou, t. ii. p. 358, 1865). A rough MS. abridgement of Cantillon's *Essai*, of Mirabeau's own making, is among the "Papiers Mirabeau," at the Archives Nationales at Paris (M 779, No. 1). It contains a dedication "A. M. l. D. D. N.," no doubt the Duke of Noailles, "under whose auspices he had studied that part of politics which is based on 'imagination' (obviously contrasting this with 'Science' *Calcul*), and who had charged him never to forget that other part of the subject which depends upon calculation, and is included in the general name of commerce; if these matters are not studied from the very bottom, if their basis is not well laid, they incur the risk of being as frivolous and useless as many other essays on commerce." The essay which follows bears all the marks of revision by Mirabeau; it begins with what is p. 56 of the printed copy, but contains some passages, especially the introductory ones of the chapters, in addition to those contained in the printed book.

Cantillon's opinions were based on the economics of the commercialist school, and of some of his English physiocratic predecessors. The "equation between land and labour," which he quotes from PETTY, is contained in the latter's *Political Anatomy of Ireland*, ch. ix. 1691 (see *Tracts, chiefly relating to Ireland*, p. 344, Dublin, 1769). Like Adam Smith at a later epoch Cantillon combined the theoretical reasoning of the English with the systematic turn of the French, thereby promoting the economics of both countries.

[With Cantillon's view of the theory of rents compare J. Arbuthnot, *An Inquiry into the Connection between the present Price of Provisions and the Size of Farms*, p. 34, 1773.—Arthur YOUNG, *Political Arithmetick*, 2d part, p. 29, 1779, and Alex. Wedderburn of St. Germains, *Essay upon the Question What Proportion of the Produce of Arable Land ought to be paid as Rent to the Landlord?* p. 4, Edinburgh, 1776. For Cantillon's part in economics see Dr. Bauer's remarks in *Quarterly Journal of Economics*, 1890, vol. v. No. 1, p. 102, and Dr. Bauer's article on the Physiocrats in Conrad's *Jahrbücher für Nationalökonomie und Statistik*, Bd. xxi. H. 2 N.F., p. 145. —F. von Sivers, *ibid.* Bd. xxii. 158.—Prof. Marshall, *Principles of Economics*, 1890, vol. i. p. 53n.—H. Higgs, *Economic Journal*, vol. i. No. 2, p. 262.] S. B.

CAPELLO, PIER ANDREA, author of a book having the title *Nuovo trattato del modo di regolare la moneta*, published 1752 at Venice, and containing an analysis of the terms "value" and "price," for which it is still noticed in books of dogmatic history. M. P.

CAPITAINERIE. A privilege granted in France by the king, down to the time of the Revolution, to princes of the blood, by which they obtained possession of the property of all game, even on lands not belonging to them; including manors granted before to individuals; so that the erecting of a district into a *capitainerie*, was an annihilation of all manorial rights to game within it. Arthur YOUNG, *Travels in France*, 2d ed. vol. i. p. 600, says "in speaking of the preservation of the game in these *capitaineries*, it must be observed, that by game must be understood whole droves of wild boars, and herds of deer not confined by any wall or pale, but wandering, at pleasure, over the whole country to the destruction of crops; and to the peopling of the gallies by the wretched peasants, who presumed to kill them, in order to save that food which was to support their helpless children." The *capitaineries* were only one form of the oppressions of the seigneurs, which will be found described in considerable detail by A. YOUNG.

CAPITAL. Definitions in political economy present great difficulties owing partly to the fact that the words employed are in general drawn from ordinary language, and partly because the fundamental ideas often overlap, and it is necessary to leave a debatable margin. There is probably no term in economics which has given rise to so much controversy as capital, and in the limits of this article it will only be possible to indicate the main points in dispute, and their bearing upon fundamental questions. As usual the historical aspect of the subject has been treated most fully by German writers (compare the masterly introduction of Knies to his work on *Money and Credit* (*Geld und Credit*); *Kapital und Kapital-Zins* by Böhm-Bawerk; and the article on "Capital" in Schönberg's *Handbuch*). The word capital is connected with *caput*, and in mediæval Latin we read constantly of the *capitalis pars debiti*, *i.e.* the principal sum as distinct from the interest. Thus originally the term seems to have been confined to loans of money. As the church forbade the lending of money for interest or usury (INTEREST AND USURY), and as this moral prohibition was generally given effect to by the law, all sorts of devices were resorted to in order to disguise the real nature of a loan (see CANON LAW). A thing was nominally bought by the borrower to be sold back after a time at a lower price to the lender (a dry bargain as it was termed), and gradually exceptions were admitted on the ground of wear and tear of the thing lent or indirect loss to the lender. In England before the time of the Tudors (compare Schanz, *op. cit. infra*) it had become generally recognised by merchants and legislators that it was impossible to distinguish between lending money itself and lending the things which had a money value. Thus in the natural course of historical development the term capital received a wider meaning. Accordingly later on we find TURGOT, as Knies points out, expressly saying that capital consists of accumulated values (*valeurs accumulées*), and that it makes no difference whether the accumulations consist of precious metals or of other things. Turgot states also that a man can live on capital, or rather the interest of capital, just as well as from personal labour or from funds derived from possession of lands. Thus capital is considered primarily as a source of profit. This historical usage of the term capital is still found implied in ordinary thought, and a Socratic inquiry on the modern mercantile mind would probably give as a first-fruit that capital is (1) *wealth which yields a revenue.*

It is quite obvious, however, as the writers on canon law were so fond of pointing out, that the precious metals are in themselves barren (*nummus nummum parere non potest*), and it is almost as obvious that any form of hoarded wealth is equally barren, that is to say unless it is actively employed so as to produce more wealth. In the earlier stages of agricultural development, for example, it is quite common to find that the stock is let with the land (and the custom still survives in the

métayer system), but unless the stock were used for productive purposes it could not possibly yield a revenue. It may further be noticed that although one private person may lend to another capital which may be used unproductively (*e.g.* money lent on mortgage) and the interest of which may still be paid punctually, it would be impossible for a whole nation (apart from lending to foreigners) to subsist on this barren use of capital. So much has this consideration impressed itself upon economists that many of them, especially English writers, have given as the root idea of capital (2) *that part of wealth set aside for future production* (see ABSTINENCE). This, for instance, is MILL'S view to the exclusion of the older notion of revenue simply. Mill indeed makes the idea of production fundamental even in the case of individuals, and would only include in a man's capital that part of his wealth intended to be used in producing more WEALTH.

A little reflection, however, will show that either the meaning of production must be strained, or else the definition of capital thus obtained will be much more narrow than in the popular acceptation. In estimating, for example, the accumulations of capital in the United Kingdom in recent years Sir R. Giffen (*Essays on Finance*, vol. i.) takes into account the movables, furniture, pictures, etc., in private houses, and roughly surmises that they amount to about half the value of the houses themselves, and although in a certain sense the term "productive" might be stretched to cover houses, it could hardly be made to cover pictures and ornaments. As the result of this line of criticism some writers (notably Knies) have made the fundamental idea in capital to be "wealth intended directly or indirectly to satisfy future needs." If a fair allowance be made for Adam Smith's want of scientific and technical phraseology his views on the fundamental nature of capital (or stock as he prefers to call it) come very near to this exposition. For Adam Smith carefully distinguishes between the wealth that is immediately consumed and the stock that is reserved or set aside out of a possible surplus. It is instructive to note that Adam Smith, in order to emphasise the distinction between INCOME and its source, or, in other words, between immediate consumption and capital, gives a very wide and unusual meaning to the term immediate. "A stock of clothes may last several years; a stock of furniture half a century or a century; but a stock of houses, well built and properly taken care of, may last many centuries. Though the period of their total consumption, however, is more distant, they are still as really a stock reserved for immediate consumption as either clothes or household furniture." In spite of the authority of Adam SMITH, however, it may be questioned if it is advisable to give to the term immediate such a paradoxical interpretation, and to exclude houses and the like from the capital of a country. A man, it may be argued, might well choose between living up to his income and saving so much a year in order to build a house for himself, and when once the house was built it would appear to form a part of the capital not only of the individual but of the nation. In fact, on analysis it seems that we ought to distinguish between immediate (in the more usual sense of the term) and deferred CONSUMPTION. Even from this point of view, however, it is impossible to take the term "immediate" too strictly, and it seems best to construe it relatively to the kind of income. The immediate consumption of a labourer earning weekly wages might be embraced within the week, whilst in the case of a high-salaried official a year might be taken as the unit, and in the case of a great nation spending money on armaments, etc., the term might be extended for some years. But even in this last example there is still a plain difference between building forts or strategic railways which are supposed to last for centuries, and providing for present wants by the personal equipment of soldiers. Practically it is of course always difficult to know how much may be fairly charged to capital account, and how much ought to be reckoned as part of immediate consumption. Logically, however, the distinction seems clear enough, and it has given rise to that description of capital (3) called by the Germans especially *consumption capital*. The principal difficulty in this conception of capital is that, in the language of one of Mill's "four fundamental propositions on capital," all capital is consumed, which, in the sense that nothing lasts for ever, is obviously true. Yet, even the schoolboy who decides between a tin-whistle and a penny pie, knows that the rate of consumption in the latter case is infinitely quicker than in the former, and it may be said that if he eats the tart he is only an unproductive consumer, whilst if he buys the whistle he is a small owner of consumption capital. And, in fact, Mill's object in this proposition appears to have been rather to emphasise the distinction between hoarding (the wealth not being productively consumed) and saving (the wealth being used as productive capital), (see ABSTINENCE).

So far then the result of the investigation on the connotation of the term capital appears to be that there are three species of capital in each of which a different quality is emphasised, accordingly as we consider (1) the yield of a revenue, (2) the production of more wealth, (3) the reservation of means for future enjoyment. It remains then to consider whether there is not some root-idea from which these three branches spring. The line of thought suggested by Adam SMITH and developed by

Knies is found to lead to this result:—*Capital is wealth set aside for the satisfaction—directly or indirectly—of future needs.* This satisfaction may be obtained by the individual by lending his wealth at "usury"—"usury of money, usury of victuals, usury of anything that is lent upon usury"—or by reserving means for future production as in the case of the husbandman and his corn or cattle, or by laying up for himself a treasure which will be a delight for many days.

In the different departments of political economy the stress is laid in general on one of these three characteristics to the exclusion of the other two. In the department of production, for example, as the very name implies, capital is regarded almost entirely as one of the principal agents in production, as sustaining or auxiliary to labour. Logically, it is not necessary to consider at this stage how the product is divided, or even that it is intended for future or immediate consumption. But in the departments of distribution and exchange, the characteristic of yielding profit or revenue is fundamental, whilst in taxation several questions of importance spring from the distinction involved in consumption capital.

The principal points of fundamental importance in the qualitative definition have now been considered, but there are several minor questions which have given rise to much controversy. (1) *Is all capital the result of labour, and ought we to exclude the forces and free gifts of nature?* The answer, as in all questions of definition, must depend purely on the convenience of the classification for the subject or problem in hand. In the department of PRODUCTION it is often necessary to contrast capital in the sense of accumulations due to labour (*festgeronnene Arbeit-Zeit* as the German socialists phrase it) and "the natural and indestructible powers of the soil" of RICARDO, as, for example, that no exception may be taken to the language, advantages of situation. In the department of DISTRIBUTION, again, stress is often laid on analogies between the limitation of natural sources of supply (and the consequent UNEARNED INCREMENT) and the ordinary forms of capital, which with sufficient labour are capable of indefinite extension at an ordinary rate of profit. On the other hand, however, it is extremely difficult practically to draw the line between the gifts of nature and the results of labour, and between earned and unearned increments. Even sheep farms in mountain districts require a certain amount of surface drainage, fencing, etc., and once the necessary labour has been bestowed, it is hard to tell how much is due to man, and how much to nature. If we consider the question from the national point of view, and take, as is natural with a nation, long periods, the labour in the mere appropriation or first occupancy of the natural sources will be found to be considerable. Compare for example the condition of England before the invasion of the Romans and during the Roman occupation, or mediæval England with the England of to-day. Rivers have been diverted, extensive forests cleared, swamps and marshes drained, and natural harbours improved and protected. Thus even in production it would not seem unreasonable to include these so-called natural sources, in order to emphasise the fact that they can only be made available, as with other forms of capital, by the labour and ingenuity of man. And although this admission is made, it would still be possible to discuss Adam Smith's favourite position that in some things, notably agriculture, nature labours with man to a greater extent than in others, *e.g.* the manufacture of scientific instruments of great delicacy. It may be observed that in estimates of national capital, such as that made by Sir R. Giffen, not only is land included, but it stands first on the list in order of importance. It is obvious also that the capital value of land would certainly include from the practical standpoint the minerals, etc. not yet extracted, as well as the value due merely to such a quality as situation. Logically, any difficulty may be technically overcome by speaking (with HELD) of the "labour of appropriation," especially if we take into account the contribution made by the state as such to the organisation and security of labour. (2) A second controversy has arisen on the question on which Mill lays such stress, namely:—"*Does the distinction between capital and non-capital depend on the intention of the capitalist, or in other words, the owner of the potential capital?*" If the answer be in the affirmative, we are confronted with the difficulty from the point of view of the individual, that the same thing would at one time—even on the same day—be considered capital, and at another non-capital. Thus Professor Marshall in the *Economics of Industry*, argues that a doctor's carriage when used on professional visits would be capital, but when used for pleasure merely would not be capital. (Compare, however, the later treatment by the same writer in the *Principles of Economics*.) This difficulty, however, would be overcome by admitting the species of consumption capital. Again, there are certain forms of wealth, machinery, tools, instruments, etc., which from their nature could only be considered as capital, whilst other forms, *e.g.* seed-corn in a famine, may or may not be immediately consumed according to the intention of the owners. After all, however, the difficulty is only one of degree, and, as in other cases, we may leave open a debatable margin in the case of the individual, whilst with a nation it would be easy to determine roughly by means of statistics

between the amount of goods or wares immediately consumed and the amount on the average reserved directly or indirectly for the future. On the whole it may be doubted if it is possible or desirable to arrive at the *intention* except by arguing from the accomplished fact, or from the nature of the things, and the only use of the discussion is to emphasise again the fundamental distinction between the satisfaction of immediate and future needs.

(3) A third question has been much debated, which is, however, more properly dealt with under WEALTH (*q.v.*), namely:—*Does capital include what are called immaterial as distinct from material utilities?* The answer is similar to that in question (1) as to the connection between LABOUR and capital, and must depend on the convenience of emphasising, or not certain points of analogy and contrast. On the one side the "fixed skill" of a workman is in many respects similar to the nice adjustment of the wheels of a machine, and resembles still more closely the trained qualities of the domestic animals. The objection that the skill is attached to the man may be answered, as by Mill, that a coal mine is also attached to a place, or, still better, by the analogy that in matters of contrast the technical skill may be considered as separated from the higher qualities of the personality of the individual. On the other hand, however, it is often necessary to contrast the worker with the work done, and the wealth produced with the people for whom it is produced. By some writers (*e.g.* LIST) the acquired skill of a people, the greater part of which has been inherited from the past, and is due to the labour, and saving, and self-restraint of past generations, is reckoned as the most important element in the national capital, and both in the department of production and in distribution the contribution of this "social capital" to the annual produce must be carefully considered. The principal reason why a civilised nation can so soon recover from the effects of a devastating war is to be found in the acquired skill of the inhabitants, and the same remark applies to the rapid development of new colonies. Thus Adam Smith might well include the skill of the workers in a nation in its fixed capital. But when, as is usual in questions of economic definition, we appeal to popular usage, we find that hitherto, at any rate, the contrast has overcome the analogy. No statistician has yet attempted to give, even roughly, a value to this "social capital," or to estimate the capital value of the skill of labourers, although in particular cases, such as compensation for injury or death, some such computation must be made. The distinction will be found to be of vital importance in discussing the connection between capital (in the narrower sense) and WAGES.

Besides the skill of the inhabitants of a country are other so-called immaterial utilities which have sometimes been included in capital, and sometimes excluded. Precious metals which form the material money of a country have always been included under its capital, and the question arises whether, if an efficient substitute can be found, this substitute is not equally capital. There can be no doubt that without the banking organisation of the United Kingdom the business even of producing wealth could not be carried on, at least to the same extent. BANKING is an essential part of natural division of labour, and BANK NOTES and other forms of representative money are quite as efficient agents of production as the precious metals themselves. These questions are, however, discussed separately under CREDIT (*q.v.*) From the individual point of view such immaterial utilities as the GOOD-WILL of a business, COPYRIGHTS, PATENTS, and the like would fall under capital unless the material characteristic is considered essential.

Besides the three species of capital already discussed there are other divisions which have found a place in the text-books. The most important is the distinction between fixed and circulating capital. Adam Smith took the terms apparently in their literal sense and considered the essence of the difference to lie in the fact whether or not the capital changed hands (or circulated) in order to obtain a revenue. "If it (*i.e.* stock) is employed in procuring future profit (as distinct from present enjoyment) it must procure this profit either by staying with him or by going from him. In the one case it is a *fixed*, in the other it is a *circulating* capital." *Wealth of Nations*, bk. ii. ch. i. Mill, on the other hand, and most recent English economists, define circulating capital, as that which performs the whole of its functions in a single use, whilst fixed capital can be used more than once in the same way. Of course in particular cases it would be difficult to draw the line accurately, but the broad distinction is quite obvious. Compare and contrast, for example, machinery as the type of fixed, with food supplies and raw materials of manufacture as the types of circulating capital. Very often by English writers circulating is used as equivalent to wages capital. Thus, under the title of the conversion of circulating into fixed capital Mill really discusses the effects of the introduction of machinery upon the working classes (see WAGES, vol. iii. and App.). This confusion between circulating and wage-capital has been one of the causes of the extreme and untenable form of statement of the wages-fund theory, and of the narrow views of the relations of industry and capital expressed in Mill's four fundamental propositions (*Political Economy*, bk. i. ch. v.) The terms sustaining and auxiliary capital seem to be more free from ambiguity or question begging. Other

divisions of capital are sufficiently described by the words used *e.g.* floating and sunk, specialised and non-specialised, etc.

It may here be observed that, considering the complicated controversies which have arisen in connection with the definition of capital, it is often useful to employ qualifying adjectives when the term is applied beyond the limits within which there is no dispute. We might, for example, speak of the skill of a workman as personal capital, and the various industrial organisations of a nation as social capital. It seems also worthy of remark that those writers who take the most narrow definition of capital, and confine it merely to material production-capital, really bring in the wider content of the idea, indirectly under different headings, *e.g.* the accumulation of capital, the efficiency of the industrial agents, organisation of industry, the influence of credit, etc. Thus it often happens that a writer imagines that he has made some important discovery on the nature of capital when he has simply made an alteration on the arrangement or classification of topics, a most useful operation if well carried out, but of subordinate importance to a positive addition to the materials of a science. The latest systematic work on *Capital* (*Kapital und Kapital-Zins* by E. von Böhm-Bawerk), which is full of excellent material from the historical standpoint, gives many examples that incur some part of this stricture.

In conclusion it must be allowed that it is impossible to thoroughly discuss such a comprehensive term as capital without travelling over every department of economics. Similarly a complete bibliography would involve a reference to almost every important economic work.

[Besides the works referred to in the text, special attention may be called to the following. On the historical side (that is of fact, not theory), as regards antiquity one of the most instructive works on the effects of capital is Mommsen's *History of Rome*. In the mediæval period the work of Schanz, *England's Wirthschaftliche Entwickelung*, etc., gives excellent material from the Saxon to the Tudor period; Thorold Rogers on *Six Centuries of English Work and Wages* and Brentano on *Gilds and Trade Unions* give the later development. On the history of the theory the principal works have already been noticed. On the theory in recent times, the reader may consult the chapter on "Capital" in the *Principles of Pol. Econ.*, by Prof. H. Sidgwick, for an excellent analysis of "common" and scientific English thought; the works of P. Leroy Beaulieu, *e.g. La Répartition des Richesses: La Science des Finances*. New ed., 1912. The work of Karl Marx (*Das Kapital*) which has been translated into English, must be read with caution as regards the deductions from the masses of adroit quotations from English sources, whilst the central theory has not been accepted by any economist of repute though still apparently the basis of German socialism. Compare A. Held on *Socialismus und Capitalismus* and Schäffle on the *Quintessence of Socialism* (translated into English). List on *National Systems of Political Economy* may be compared with the *Wealth of Nations*, bks. ii. and iv.] J. S. N.

History of the word.—The word "capital" in its economic sense, like the word "principal," and like the word "capital" itself in its geographical sense, is an adjective elliptically used as a substantive (Murray, *New English Dictionary*, s.v.) The full phrase is "capital stock." "Capital" was used for "capital stock," at least as early as 1635 (*e.g.* in Dafforne, *Merchant's Mirrour*, Ex. No. 96), but the fact that it was merely an adjective was by no means forgotten. The Act 8 & 9 W. and M. c. 20 (1697) "for enlarging the capital stock of the Bank of England," provides that before the enlargement is made, "the common, capital, and principal stock of the said governor and company shall be computed and estimated by the principal and interest owing to them by the king, or by any others, and by cash, or by any other effects whereof the said capital stock shall then really consist over and above the value of the debts which they shall owe at the same time for principal and interest to any other person or persons whatsoever." In Dyche and Pardon's Dictionary, 1735, the article on "Capital" begins, "Chief, head, or principal; it relates to several things, as the *capital stock* in trading companies is the fund or quantity of money they are by their charter allowed to employ in trade." Adam Smith frequently uses the full phrase. E. C.

Legal ruling that Capital need not be replaced from profits.—A trader's assets are in most cases wholly or partly of a perishable nature. Before ascertaining the profits derived from such assets in a given year provision ought to be made for the depreciation estimated to have taken place during that year. If, for instance, a person who invested £1000 in the purchase of a patent having five years to run, and producing an annual profit of £500, treats the whole of the annual £500 as the profit of the respective year, he will find, at the end of the five years, that his source of income has disappeared. If, on the other hand, at the end of each year a sum of £200 is carried to the credit of a sinking fund and the remaining £300 only are treated as income, the owner of the patent will at the end of the five years be able to invest his original £1000 in some other profitable manner. Where the facts are so very plain this seems almost a truism, but in many cases it is more difficult to distinguish between income in the proper sense and repayment of capital. The inquiry ought, however, always to be made and acted on. The importance of taking the depreciation of property into account in ascertaining the profits of a given year is even more obvious in the case of a company than in the case of a private individual. The gradual disappearance of wasting property must in the end

materially damnify PREFERENCE shareholders, DEBENTURE holders, and ordinary creditors, and must also cause great injustice as between the persons entitled to the income of shares for limited periods and the persons ultimately entitled to the property of the shares. It seems strange that although the integrity of the capital of limited companies is, in other directions, most jealously watched by our courts, the greatest laxity is allowed with reference to the valuation of assets of a wasting nature.

In the leading case of Lee *v.* Neuchatel Asphalte Company (Law Reports, 41 Chancery Division, p. 1) it was held by the Court of Appeal that "there is nothing in the Companies Acts to prohibit a company formed to work a wasting property, as *e.g.* a mine or a patent, from distributing, as dividend, the excess of the proceeds of working above the expenses of working, nor to impose on the company any obligation to set apart a SINKING FUND to meet the depreciation in the value of the wasting property."

Economically this decision cannot be considered sound; while, from the point of view of persons having dealings with limited companies, and relying on the correctness of their annual balance-sheets, it is highly inconvenient, and further it contradicts every sound principle of business and of bookkeeping.

Perhaps the most important case in this relation is the Ammonia Soda Company *v.* Chamberlain (1918), 1 Chancery 266, in which Eady, L.J., said in regard to the division of capital into fixed and circulating, and to the necessity of maintaining the latter in its entirety before providing a dividend:—"The fixed capital of a company is what the company retains in the shape of assets upon which the subscribed capital has been expended, and which assets either themselves produce income independent of any further action of the company, or, being retained by the company, are made use of to produce income or gain profits. The circulating capital of a company is a portion of the subscribed capital intended to be used by being temporarily parted with and circulated in business." This was followed in Lawrence *v.* West Somerset Mineral Railway (1918), 2 Ch. 250; and applied in Irish Catholic etc. Insurance Company *v.* Commissioners of Inland Revenue (1918), 2 Irish R. 510. A dividend can be paid out of the appreciation of capital *assets* provided that this does not diminish the value of the capital *stock*: Cross *v.* Imperial etc. Gas Company (1923), 39 *Times* L.R. 470. A profit which does not arise out of the company's business, *e.g.* that shown on redemption of debentures at a discount, is an appreciation of capital stock which is not distributable as dividend: Wall *v.* London and Provincial Trust (1920), 2 Ch. 582.

E. S.; W. A. B.

Capital rarely permanent.—The constant need of renewal of capital is a point often not remembered. Capital, as Professor Sidgwick says (*Principles of Political Economy*, ch. v.), is "a semi-technical term, being habitually used not by men generally in their ordinary thought, but by men of business and others when discussing industrial matters," "In its original use by practical men," Professor Sidgwick continues, "capital" undoubtedly means "wealth employed so as to yield a profit." The distinctions which, as Professor Sidgwick shows, must be made as to the use of the term thus defined, are stated under the head of CAPITAL (*q.v.*), the remarks on the subject in this place are confined to the point—that the "wealth" thus "employed" stands constantly in need of renewal. Whether "capital" exists in the form of machinery or any other finished product of intelligent skill, or in the form of the floating capital or cash used in paying the labour employed in keeping that machinery in motion, or in purchasing the materials needed to maintain any product of intelligent skill—a mint for instance in working order—constant renewal is, in by far the greatest number of cases, needed to maintain not merely its efficiency, but its very existence. A railway, for example, needs not merely a continual repair but perpetual reconstruction, which has properly to be charged to the fund which is properly profit, but which in this technical sense is called "revenue." As traffic increases new rails have to be laid down, old stations enlarged and renewed, old bridges replaced by new ones capable of bearing the heavier weights of the more powerful locomotives and the larger trains which they draw. In cases like this "capital"—the word is used here in the technical sense described by Professor Sidgwick—has already been charged with the cost of construction of the stations and bridges which are now superseded, and hence have to be rebuilt. It is "revenue" therefore, the produce of "capital," not capital itself, which has to bear the cost of the renewal so far as this renewal merely replaces what is actually superseded. Thus, in the case of a station which cost originally £10,000, and owing to the increased traffic has become insufficient to meet the needs of the locality, and has to be replaced by one costing £50,000, in all well-managed railways the rule is that capital bears only the difference between the two sums, and revenue is charged with the replacement of the original outlay. This example is given as merely one instance of a process which has to be followed in every instance in which "capital" has to be perpetually maintained, however it is employed. It shows further, not only the proper method of apportioning the difference between gross and net "revenues," that is between gross and net profit, but the very heavy drafts which must con-

stantly be made on "revenue," that is on net "profit," to meet a class of expenditure which to many appears exceptional, but which is really a normal incident in the cost of production. When examined into thus, it is interesting to trace how little of what is ordinarily termed "fixed" capital is really permanent. The apparent permanence of "capital" is occasionally spoken of as something which may always be depended on, something which endures for ever. Because the payment of the interest on the "debt" of a nation, or the "stock" of a company is continued from year to year, it is assumed that the wealth represented by the original outlay continues in existence and that the "capital" remains—capital described as the "saved produce of past labour." The "capital considered either in the concrete as (mainly) the accumulated stock of instruments auxiliary to labour, or more abstractedly as the power of directing labour to the attainment of greater but remoter utilities through the control over the produce of labour possessed by the owners of accumulated wealth," is only maintained through a perpetual process of reproduction.

[See Mill, *Principles of Political Economy*, bk. i. ch. v. For connection between κεφάλαιον, *caput*, and capital, see Macleod, *Dictionary of Political Economy*, s.v. "Capital," pp. 324-67, and Roscher, *Volkswirthschaft*, p. 89, § 42.]

CAPITATION (IN FRANCE). The *capitation* was a graduated poll-tax, first imposed in 1695 during the war with the league of Augsburg; abolished in 1697, on the conclusion of the treaty of Ryswick, it was renewed when the war of the Spanish Succession broke out in 1701. From this time it became a regular source of income until the Revolution.

The imposition of the *capitation* is a proof of the immense power of the monarchy under Louis XIV. No consent was asked, and no regard was paid to class privileges. The tax was to press upon all classes including the nobles. The mendicant orders, and all whose contributions to the state did not exceed 40 (afterwards 20) sous were exempted. The rest were divided into twenty-two classes according to rank, with a diminishing scale of payment. The first class, which consisted of the dauphin alone, paid 2000 livres; the second, viz. the princes of the blood, paid 1500; and so on to the four lowest classes, which paid respectively 40, 30, 10, and 3 livres. In principle, at least, the tax was more equitable than any other in France.

The nobles and clergy had been powerless to prevent the imposition of the tax, but they soon succeeded in modifying its assessment in their own interests. The clergy, in fact, succeeded in escaping it from an early period. In 1695, and again in 1701, they agreed to pay 4,000,000 livres a year as long as the war lasted. In 1709, when the government was reduced to the greatest straits, they purchased permanent immunity from the *capitation* by an immediate payment of 24,000,000 livres, most of which they raised by loan. The *pays d'état* and many of the towns compounded for a fixed annual payment, as in the case of the *taille* (see TAILLE). The nobles obtained the appointment of special receivers for their own order, and succeeded in escaping great part of the burden.

But the most fatal change was the adoption (in those provinces where the *taille* was levied on personalty) of the assessment for the *taille* as the basis of that for the *capitation*. The division of the twenty-two classes was soon lost sight of, and the burden upon the lower classes was enormously increased. If the *taille* was increased, the *capitation* of the ROTURIER was *ipso facto* increased too. Thus the practice grew up of collecting the tax first from the non-privileged, and then, if there was a deficit, it was imposed upon the privileged classes. Thus it was reckoned that in 1788 a *roturier* paid about 12 sous per livre; and a noble only 2. The class which ought to have paid 3 livres by the original arrangement had come to pay 24; the class which ought to have paid 10 paid 60, and that which ought to have paid 30 paid 180. This enormous change was produced within a century, not by formal enactment, but by the steady pressure of the privileged classes upon the administration. The result was disastrous to the state, as the tax, according to NECKER, only produced 41,000,000 livres, whereas it was estimated to produce 54,000,000.

[Necker, *De l'Administration des Finances de la France* (1784).—Gasquet, *Précis des Institutions Politiques et Sociales de l'Ancienne France* (Paris, 1885).] R. L.

CAPITATION TAXES. Taxes directly imposed on each individual to be charged therewith, the amount payable being either a uniform sum or, as in later times, a sum regulated by reference to a prescribed scale varying with the rank and station, and, in some instances, with the supposed fortune of the person charged. Such taxes are frequently described as poll taxes.

The first capitation or poll tax was imposed in England in 1377 at the uniform rate of 4d. per head. It is stated in the Subsidy Roll printed in the *Archæologia*, vii. 37, that the sum produced was £22,607 paid by 1,376,442 persons, although, as Mr. Dowell remarks, the "sum raised does not correspond with the stated number of taxpayers." In 1379 and 1380 graduated poll taxes were imposed, the tax levied in the latter year leading to the movement in which Wat Tyler was the moving spirit. Thereafter, capitation taxes were levied at rare intervals, the principle of classification being present in all of them and on an increasingly elaborate basis. In 1692 a poll tax paid in each quarter of that year produced £580,000, and in 1698 a similar tax estimated to yield £800,000 pro-

duced no more than £321,397. "When a tax," said DAVENANT, "yields no more than half what in reason might be expected from it, we plainly see that it grates upon all sorts of people; and such ways and means of raising money should be rarely made use of by any government." Accordingly, the poll tax of 1698 was the last imposed in this country, although the system survives in several European countries.

Adam SMITH (*Wealth of Nations*, bk. v. chap. ii. art. iv.) condemns capitation taxes as altogether arbitrary and uncertain, to which he adds that "the greatest sum which they have ever afforded might always have been found in some other way much more convenient to the people." It may, however, be said, that it is in the inequality of capitation taxes, rather than in their uncertainty or arbitrary character, that the essential objection to them consists. They need not necessarily be uncertain, and their arbitrary character depends mainly upon the manner in which they are administered. If levied, however, without distinction of age, sex, or fortune, they are so manifestly unequal that they have been described as the taxation of men as if they were beasts, and as constituting "a mark of slavery." And even when attempts have been made to remedy this inequality by suitable gradations, sufficient care has seldom been taken in constructing them to avoid the imposition of a direct burden upon those above the condition of beggary but possessed of the means of a bare subsistence only. Graduated capitation or poll taxes may be described as rough and ready attempts to achieve that species of direct taxation which is more scientifically accomplished by a well-constructed income tax (see INCOME TAX), to which tax, as then known, many of the observations of the earlier economists on the subject of capitation taxes are indeed equally directed.

T. H. E.

[See Dowell's *History of Taxation and Taxes in England* (London, 1888).—Block's *Dictionnaire Général de la Politique* (Paris, 1873).]

CARACCIOLI, DOMENICO (marquis and viceroy of Sicily), born in Naples 1715, died 1789; published (1785) a pamphlet on corn laws, having seen their bad consequences during a great famine which devastated Sicily in 1784 and 1785. However, he is not a thorough free trader, and he is more of a political writer than an economist. CUSTODI published his pamphlet in his *Economisti classici Italiani*, Milano, 1804. M. P.

CARAFA, DIOMEDE, perhaps the first serious writer in Italy on public finance. When he was born is not known. He died in 1487. He was duke of Maddaloni and was invested with the highest political offices under Alfonso I. of Aragon, who only succeeded in taking Naples from Renato of Anjou through the bravery and ability of his captain Carafa.

Carafa's book consists only of eighty-eight pages, and its full title is: *De regis et boni Principis officio opusculum a Diomede Carafa, primo Magdalunensium Comite, compositum*, Neap. apud Castaldum, 1668 (edition now circulating). He wrote his book between 1469 and 1482 in Italian, and the Duchess Eleonora, daughter of Alfonso I., and wife of Ercole I., Duke of Ferrara, whose instructor Carafa had been, directed it to be translated into Latin. It is divided into four parts: (1) De imperio tuendo, (2) de jure dicendo et justitia servanda, (3) de re familiari et vectigalibus administrandis, (4) de subditorum civitatisque commodis procurandis.

In the third part, which is the financial one, of his treatise, Carafa makes some original remarks. He maintains that the revenue must be regulated in proportion to the expenditure, and that this has three principal divisions—expenses for the protection of the state; those necessary for the court of the prince; and lastly a category of varying importance relative to the general welfare of the state. As this last category is the variable and unforeseen one, whilst the two other ones are certain, the greatest possible margin should be left for it on the side of income, and the other expenditure should be reduced to a minimum. The revenue should be minutely accounted for and examined into every year by a special body of officers. Taxes should be stable and in every detail indisputable (Carafa says: taxes should be formulated so clearly that people need not go to law about them to know *what they have to pay*) and not oppressive; but taxes will be certain to be oppressive if the greatest economy does not prevail in the expenditure. Economy in the expenditure makes it possible for the prince to choose amongst the many possible taxes only the very best, and eliminate especially those which are iniquitous or unequal in their incidence. Moderation in the expenses will also have the good effect that the prince need not have recourse to forced loans, which he thus characterises, "Quid aliud existimari debet, quam *tutum quoddam rapinae aut furti genus?*" Such loans induce population and capital to emigrate, and it would be highly immoral for the prince to endeavour to search out where wealth was, by employing spies so as to plunder his subjects the better. He thinks the collecting of taxes ought to be farmed out, because the "publicans" act with greater zeal, intelligence, and activity than government officials. Carafa clearly recognises that the wealth of the subjects is the foundation of the whole state machinery, and must therefore be spared, "Subditorum facultates potentiæ regiæ fundamenta existimari oportet." Far bolder than S THOMAS AQUINAS (*q.v.*), Carafa does not fear moral evils from a development of commerce, the first great source of the wealth of subjects;

therefore commerce must be left absolutely free. Carafa's powerful intellect discerned how beneficial for a country are foreign merchants who settle in it, and strongly opposed every sort of oppression tending to give foreigners a position inferior to that of native citizens. His formula of liberty is "Sicut indignum est a civibus officia Regentis invadi, *ita civium negotia occupari a Rege non decet.*" Nevertheless Carafa cannot yet quite free himself of the prejudice that state-help is of some good, and he advises the prince to lend money, to give prizes and aid industry in many other ways, since the prince, he says, is sure never to lose in the long run by doing so, because "princeps inops esse non potest, cujus imperio ditissimi homines subjiciuntur." Especially agriculture needs the indulgence of the prince, because peasants often need loans, and when the seasons have not favoured them, the tax collectors ought not to aggravate their situation, but give them a little time to pay their taxes and their debts. The labour of the subjects is the source of the wealth of a nation and the government must never crush them and *if it can*, must help them; "*nec tamen negaverim non posse hoc* (state-help) *ab omnibus et ubique praestari; sed ubi et facultatum copia, et locorum commoditas suppetit, ibi subditos a Principibus suis, et consilio, et re excitandos adjuvandosque esse assero.*"

Is it not remarkable to find a statesman and a warrior of those rough times speaking in such terms? M. P.

CARBONARI. This secret society (referred to in the notice of the life of Etienne Cabet), claims a history of much antiquity, and Francis I. of France as founder. Its recent activity dates, however, mainly from the revolutionary period, at the close of the 18th century, when its principal sphere of action lay in Italy. The project formed by the society of a united Italy, under the name of the Ausonian Republic, proved abortive; but the fall of Murat was in great measure due to its influence. After the restoration of the Bourbons, however, to the kingdom of Naples, the Carbonari were thrown on one side, and the society was proscribed throughout Italy. Expelled thence, it began to take root in France, and Lafayette became its chief (*c.* 1820-1821). After many vicissitudes the society was revived about 1825, and some ten years later coalesced with the society named Young Italy. The course which the society of the Carbonari took marks "a transition period in the history of secret societies. From secret societies occupied with religion, philosophy, and politics in the abstract, it leads us to the secret societies whose objects are more immediately political. And thus in France, Italy, and other centres it gave rise to numerous and various sects, wherein we find the men of thought and those of action combining for one common object—the progress, as they understood it, of human society" (Heckethorn, vol. ii. p. 115).

[For literature, see *The Secret Societies of all Ages and Countries*, C. W. Heckethorn, 2 vols., London.]

CARDOZO, Isaac N., born in 1786 in Georgia, U.S., settled in Charleston, S.C.; engaged in journalism, and died in 1850. In 1826 wrote *Notes on Political Economy*, Charleston, S.C., pp. 125. This was called forth by the publication of Professor M'Vickar's edition of M'Culloch's article on "Political Economy," originally published in the *Encyclopædia Britannica*, a statement of the principles of political economy which Cardozo regarded as erroneous when applied to the United States. The Ricardian theory of rent was especially attacked; many critics at that time saw that the conditions of land tenure and cultivation were so different in the United States from those in England that they concluded that Ricardo's theory was fundamentally erroneous. As editor of the *Southern Patriot*, 1816-45, and of the *Evening News*, 1845-50, Cardozo wrote in favour of free trade, and showed an unusual acquaintance with the subject of finance. He frequently contributed to the *Southern Quarterly Review*. D. R. D.

CAREY, Henry Charles (born in Philadelphia, United States, 1793, died in that city 1879), was the son of Matthew Carey, an Irish exile, who had become a man of mark as a publisher, and as a writer on economic and political questions. The son succeeded his father as head of the publishing house, but retired with a competency in 1835, and from that time devoted his energies to economic science and related subjects. Thirteen octavo volumes and three thousand pages of pamphlets remain as the fruit of his activity, besides an amount of matter, supposed to be twice as great, contributed by him to the newspaper press. Of his more important works there are translations in French, Italian, Portuguese, German, Swedish, Russian, Magyar, and Japanese, attesting his remarkable power of commanding attention in spite of the difficulties created by great prolixity, eccentric style, and frequent obscurity of thought.

Carey began his scientific career at a juncture when the English School appeared to have exhausted its deductions from assumed premises, and to shrink from adjusting its conclusions to the conditions of actual life. His treatment of Social Science was original, and led him to a series of supposed discoveries, the order of which he has stated in the introduction to his most important work, *The Principles of Social Science*. His point of departure was a theory of Value which he defined as the "measure of the resistance to be overcome in obtaining things required for use, or the measure of nature's power over man"—in simpler terms

the cost of reproduction. This theory Carey applied to every case of value—to commodities, services, and land, and in some passages seemingly to man himself. Reasoning that every gift of nature is gratuitous, he found a universal tendency to a decline of value as the arts advance, and to a decrease in the value of accumulated capital, as compared with the results of present labour, with a resulting harmony of interests between capitalist and labourer. This theory Carey enunciated in his *Principles of Political Economy*, published in 1837-40, and its appearance in slightly modified terms in BASTIAT'S *Harmonies Économiques* in 1850, led to a sharp discussion between the two authors, in the *Journal des Économistes* for 1851. The attempts of Dühring in Germany to establish the claims of Carey as a reformer of economical doctrine, led to an equally sharp controversy between Dühring and LANGE, in which the latter had the best of the argument.

Ten years later, in his *Past, Present, and Future*, Carey announced a law of production from land the exact reverse of RICARDO'S With great wealth of illustration, he laid down the principle that, in the progress of society, men first till the easily worked and poorer soils, and descend upon the richer lands as capital and numbers increase, so that with the advance of the community the rate of return from land rises instead of falling. Closely connected with this supposed reversal of Ricardo's doctrine, and a natural deduction from the continually increasing ability to support increasing numbers, was the total rejection of the Malthusian law. Logical necessity, however, forced Carey to seek for some ultimate limiting principle, and this he found at last in Herbert Spencer's conjectured physiological law of the diminution of human fertility, and ultimate equilibrium between numbers and subsistence. It may be also noted in passing, that with the Ricardian and Malthusian doctrines Carey also abandoned his earlier belief in free trade, from a conviction that, in the present state of the world, the co-ordinating power of the government must be used, in order to preserve economic harmony and to arrive at ultimate freedom.

Finally, in the second chapter of his *Social Science*, Carey announced the crowning discovery of "the great law of molecular gravitation as the indispensable condition of the existence of the being known as man." The laws of being he declared to be the same in matter, man, and communities. As in the solar world attraction and motion are in the ratio of mass and proximity, so in the social world, association, individuality, responsibility, development and progress are proportionate to each other. This theory, not of analogy, but of absolute identity of law, in the physical and in the social world, is maintained with great vigour in the *Unity of Law*, published when Carey was in his seventy-ninth year.

The scientific importance of these theories has been maintained by Dühring, Ferrara, and Wirth, and has been questioned by HELD and Lange. However revolutionary the theories may be logically, they had, outside of the middle United States, little effect in establishing a school, even in the author's lifetime, and since his death, under the changed conditions of economic discussion, have ceased to attract much attention.

In his own country, Carey is probably best recollected as an advocate of the policy of protection. This policy he urged upon grounds so unusual, that it may be said that, in the discussion, he seldom pursued his opponents far upon their own lines of argument, nor has he often been followed by them upon his own. The central point of his social philosophy was the importance of association as the primary condition of progress. In mere trade, as between countries exchanging manufactured goods and raw products, he found an influence which centralises power and wealth on the one side and acts towards dispersion and decay on the other ; but in the commerce of services and ideas carried on by men exchanging with each other directly, he found a tendency to closer association, increased economic efficiency, and general well-being. His treatment of INTERNATIONAL TRADE, then, turned chiefly upon the stimulus to be given to producers by the home market, a consequent rapid societary movement, an early diversification of pursuits, quickened thought, and a resulting gain in productive power. In this manner he developed many of the arguments for the protective system which have now become common, and perhaps helped in giving to those arguments a currency much wider than the acceptance, or even the knowledge, of his general system, among protectionists to-day. (See AMERICAN SCHOOL OF POLITICAL ECONOMY.)

Carey held no public office, but his mental and social qualities made him for many years a central figure among men of cultivation and influence in his own community. A brief memoir of him was published in Philadelphia (1380) by his friend, Dr. William ELDER, from which is taken the following list of his principal works, omitting the long catalogue of pamphlets :

Essay on the Rate of Wages, 1835.—*Harmony of Nature* (privately printed), 1836.—*Principles of Political Economy* (3 vols.), 1837 '38 '40.—*The Past, the Present, and the Future*, 1848.—*Harmony of Interests, Agricultural, Manufacturing, and Commercial*, 1850.—*Slave Trade, Domestic and Foreign*, 1853.—*Principles of Social Science* (3 vols.), 1858-59.—*Manual of Social Science* (edited by Miss M'Kean), 1864.—*The Unity of Law, as exhibited in the relations of Physical, Social, Mental, and Moral Science*, 1872.

Closely related to the above is the *Manual of Political Economy*, by E. Peshine SMITH, 1868. The Claims of Carey to a high place among modern economists have been maintained in Germany especially by Eugen Dühring (*Carey's Umwälzung der Volkswirthschaftslehre und Socialwissenschaft*, 1865) and in America especially by Mr. Carey-Baird. Readers who may wish to see a statement of the case rather from the side of his followers than from that of his critics are referred to the writings of these authors. C. F. D.

CAREY, MATTHEW (father of H. C. CAREY) born in Ireland in 1760, emigrated to United States in 1788 in consequence of political troubles. His career was varied and successful; editor of newspapers and magazines, pamphleteer, publisher, he was till his death in 1840 (at Philadelphia) a prominent figure. He wrote numerous pamphlets, partly political, partly economical. In 1820-40 he was the most active among the advocates of protection in the United States. Among his pamphlets (all published at Philadelphia) may be mentioned:—

Brief Examination of Lord Sheffield's Observations on Commerce of United States, 1791.—*Appeal to Common Sense and Common Justice*, 1822.—*Essays on Political Economy, or the most certain Means of promoting Wealth*, etc. (1822).—*The Crisis*, etc., 1823.—*Examination of the Boston Report*, etc., 1828. F. W. T.

CARLI, GIAN RINALDO, born at Capo d'Istria 1720, died at Milan 1795. In 1744 he became professor of astronomy at Padua. In 1753 he settled at Milan, where he was appointed president of the financial board by the Austrian government.

Between 1751 and 1760 he published his famous work on *Coins and Minting*. (A part of the first volume was published in 1751 in Venice under the title, *Della origine e del commercio della moneta, e della instituzione delle zecche d' Italia;* the whole of the first volume was published at the Hague in 1754 under the title, *Delle monete e dell' instituzione delle zecche d' Italia;* in 1757 he published the second volume at Pisa, and in 1759 the third volume, in two parts, at Lucca.) In 1766 he published at Milan a pamphlet on the deterioration of the coin in Milan, and the rules he gives for amelioration were, later on, the basis of the reform which was effected. Ten years later appeared his report on the "Census of the State of Milan," containing a critical history of methods for valuations of property. In 1770 he wrote a very able refutation of the mercantile theories concerning the wealth of nations as measured by exports and imports (*Breve ragionamento sopra i bilanci economici delle nazioni*), hence it is somewhat surprising to find him writing in 1771 a pamphlet on the corn trade (*Del commercio libero dei grani*) in support of GALIANI, combating his critics, and strongly in favour of governmental regulation of this branch of commerce. Most of his economical writings have been reprinted in CUSTODI'S *Economisti Italiani*, Milan, 1804 Besides being an economist he was a good antiquarian and historical writer. He tarnished his character by his excessive hatred and jealousy of Pietro VERRI, the economist. M. P.

CARLYLE, THOMAS, born 1795, died 1881. Carlyle conceived that a true political economy should be a political philosophy and tell us "what is meant by our country, and by what causes men are happy, moral, religious, or the contrary" (see *Life* by Froude, vol. ii. p. 78). Economics in a narrower sense was associated by him with BENTHAM and M'CULLOCH ("M'Croudy"), and nicknamed, through a misconception, pointed by the power which paradox sometimes exercised even over his happiest thoughts, the "dismal science." His praises of Work and THRIFT (*Past and Present*, etc. etc.), his description (from FRANKLIN) of man as a tool-using animal (*Sart. Res.*), and his respect for pioneers who drain fens (see *Cromwell*) or make railroads, like "the rugged BRINDLEY" (*Past and Present*), or reclaim the moors and forests (*Latt. D. P.*, No. 1), even his cardinal principle "know what thou canst work at" (*Sart. Res.*), are the outcome of his character as moral teacher, and point to no special economical bent, though the last no doubt implies the economical principle of division of labour. He is courteous to "national economy" when identified with Old Frederick William (see *Frederick the Great*, bk. iv. ch. iii.), and he even allows that English political economy has had its lesson to teach us (*Latt. D. P.*, No. 1). Even "mammonism" itself "has seized some portion of the message of nature to man; and, seizing that and following it, will seize and appropriate more and more of nature's message" (*Past and Present*). The English people are the wisest in action, and their practical material work is the one thing they have to show for themselves that is true and solid (*Past and Present*). But he has done most service to economics by his criticisms. When *Past and Present* appeared (1843) the *Deutsch-Französische Jahrbücher* of MARX and ENGELS (App.) took note of it as the most important book of the day on social questions. Carlyle there showed that extreme LAISSEZ-FAIRE may mean disintegration of society and simple anarchy; it removes old bonds, and leaves men disjoined from each other, except for the "nexus of cash payments." The result is the "nomadic servitude" of the working classes and the destruction of all security and permanence in their conditions of life. In the *Nigger Question* (1849) he allows no advantage to the English labourer over the West Indian slave; the slaves were "hired for life," and the workman are hired by the job. He is on safer ground when he points to the common liability to disease as a wholesome

reminder to the rich of their common humanity with the poor (*Past and Present*), and when he impresses on economists the fact that their ECONOMIC MAN is an abstraction, and the universe is not one huge shop. He derides mere skill in selling cheap (*Bobus of Houndsditch*), and even industrial enterprise, so far as it aims at profit-making (Hudson, *Plugson of Undershot*, etc.). But he is firm against corn laws, and against the landowners who "refuse to take the market rate for their onions," and forget that *they* did not make the land of England. He goes farther than most economists in his estimate of "captains of INDUSTRY," and in his view that the relation of MASTER AND SERVANT is eternal (*Nigger Question*). He shows no appreciation of the power of workmen's combinations: and has no sympathy with nations and peoples as distinguished from individuals. On the whole economists have learned more from his protests against abstract Ricardian political economy and its tendency to reduce the state to "anarchy plus the constable" than from any of his positive teachings. His pleadings had their influence even with men like John MILL, who were perfectly aware of their defects of logic. It should be added that the "theory of dependence and protection" criticised by Mill in his chapter on the "Probable Futurity of the Labouring Classes" (*Pol. Econ.* iv. vii. § 1) is essentially that of Carlyle. J. B.

CAROLUS (English). Gold coin (Charles I.) rated at 20s. Also called a "unit" or "broad." Weight, 140·5 grains. Fineness, 916·6̇. Value at £3:17:10½ an ounce, £1:2:9½. F. E. A.

CAROLUS DOLLAR. A name sometimes given to the Spanish dollar which circulated for many years throughout America and in China and the East generally, and which bore the effigy of either Carolus III. or IV. of Spain. The coin was also known as a "pillar dollar," a name which it derived from the fact that part of the device on its reverse consisted of two pillars, intended to represent the Pillars of Hercules (the Straits of Gibraltar). Its Spanish name was "peso duro" (or hard dollar). It was also called an "eight piece" on account of its division into 8 reals. (For the dates of issue, weight, and fineness, see DOLLAR, HARD.) F. E. A.

CARRIER, COMMON. A common carrier is one who plies his trade between certain places and regularly undertakes for a pecuniary consideration to transport the goods of all who choose to employ him. By Sch. 6 to the Railways Act 1921, the expression "common carrier by land" includes those who are also carriers by water, and to such carrier this act applies. At common law the principal duties of a common carrier are: (1) To carry all things belonging to the description of articles which he publicly professes to carry for any person who is ready to pay him his customary hire, provided he has room for the things in his cart or carriage, or other means of transport. (2) To take proper care of the goods he carries, and to make safe delivery to the consignee. He is regarded as an insurer of the goods. (3) Every carrier of passengers for hire is answerable for the least want of forethought, skill, or care in himself or his servants, arising from the discoverable defectiveness of his conveyance, horses, or equipments. He is not an insurer like the carrier of goods. The status of a common carrier at common law has been modified by the following statutes. By the Carriers Act 11 Geo. IV. and 1 Will. IV. c. 68, as amended by Sch. 6 to the Railways Act, 1921, he is not to be liable for the loss of or injury to gold, silver, plated articles, precious stones, jewellery, watches, clocks, trinkets, bills, notes, securities, stamps, maps, writings, pictures, glass, china, furs, or lace if the value exceeds £25, unless the value be declared and an increased charge be demanded and paid. The act does not apply to any loss or injury arising from his own misfeasance or the felonious acts of his servants. By the 29 & 30 Vict. c. 69, he is not bound to receive specially dangerous goods. By 19 & 20 Vict. c. 60, § 17, a Scots carrier is liable for damage by accidental fire. (RAILWAY, CANALS, SHIPPING.)

[*Laws of England*; nom. Carriers.] W. A. B.

CARRYING OVER. On all stock exchanges there are dates for settlements of bargains which it is not convenient for operators to negotiate for ready money. The largest settlements are those which are carried on in the middle and near the end of each month on the London stock exchange. Before the dates of settlement those who have bought securities which they are unwilling to pay for, and those who have sold what they cannot deliver, come to an agreement by which the bargains are "carried over." Carrying over, then, is the process of postponing, by agreement, the date of settlement. If the stock can be easily borrowed in the market, the buyer pays a rate of interest, sometimes called CONTINUATION OR CONTANGO, for the privilege of prolonging his bargain till the next settlement. If the stock is scarce, it sometimes happens that a seller, who cannot deliver or borrow his stock, must pay a fine called BACKWARDATION (*q.v.*) to the buyer. A. E.

CARRYING TRADE. "The carrying trade," says Adam SMITH, "is employed in transacting the commerce of foreign countries, or in carrying the surplus produce of one to another" (bk. ii. ch. 5). He remarks that the line of distinction is often not drawn with sufficient clearness between it and the foreign trade of consumption. In a celebrated passage he institutes a comparison between the encouragement and support given to the productive

labour of a country by the wholesale home trade, the foreign trade of consumption, and the carrying trade, greatly to the disadvantage of the last. "That part of the capital of any country which is employed in the carrying trade is altogether withdrawn from supporting the productive labour of that country to support that of some foreign country. Though it may replace by every operation two distinct capitals, yet neither of them belongs to that particular country." The carrier's profits are the only addition it makes to the wealth of the country, except in so far as the part of the capital employed in it, which pays the FREIGHT, puts into motion a certain number of productive labourers. The carrying trade, being carried on with the surplus remaining after the home and foreign trades are provided for, is, in his opinion, "the natural effect and symptom of great national wealth, but does not seem to be the natural cause of it." Holland had still, in his time, the largest share of the carrying trade of Europe, because it was, in proportion to its territory and population, by far the richest country in Europe; England, too, was held to have a large part, but much of it was really a "round-about foreign trade of consumption." Some of Adam Smith's successors have disputed his views respecting the economic nature of the carrying trade, and have maintained that it is a matter of indifference to a nation how a capital is employed so long as the ordinary rate of profit is obtained. But see Prof. Nicholson's Preface to his edition of the *Wealth of Nations*.

There is a tract entitled "Observations touching Trade and Commerce with the Hollanders and other Nations," which is commonly attributed to Sir Walter RALEIGH, and which appears at least to have been laid by him in manuscript before James I. In this a very interesting account is given of the carrying trade of Holland. The origin of it he represents as due to the mismanagement of the Portuguese. The "home-bred commodities" of the Hollanders he represents as insignificant in amount, and "not a timber tree," he says, "grows in their country"; yet "their traffick with the Hanstowns exceeds in shipping all Christendom." They transported the "merchandises of France, Portugal, Spain, Italy, Turkey, East and West Indies, into the east and north-east kingdoms of Pomerland, Spruceland, Poland, Denmark, Sweedland, Leifland and Germany, and the merchandises brought from the last-mentioned kingdoms . . . into the southern and western dominions." Their success he attributes mainly to their judicious and liberal regulations for the encouragement of commerce.

It is commonly believed that the first heavy blow to the Dutch carrying trade was dealt by the English NAVIGATION ACT of 1651, re-enacted, with some modifications, after the Restoration (12 Chas. II. ch. 18). Some have denied this, but, it would seem, on insufficient grounds. That the Dutch suffered by this legislation can scarcely be doubted, though it may well be questioned whether England gained by it in a commercial sense. Politically, that is to say, in relation to the strength and security of the state, Adam Smith pronounces the acts, though prompted in some degree by national animosity, to have been "as wise as if they had been dictated by the most deliberate wisdom."

J. K. I.

CARTEL. Cartel means, in international law, the terms of agreement between belligerents for the exchange or ransom of prisoners. The "cartel" of chivalry meant first of all the terms of a combat, and then simply the challenge; and the second is still its ordinary meaning on the Continent. By analogy, the word *Kartell* is now often used by German economists to denote a TRUST, *i.e.* an agreement between rival merchants to limit production or otherwise temper the extremity of competition; so in 1889 it was used of the suspension of hostilities between conservative and liberal parties in view of the common defence of the empire.

J. B.

CARTOGRAM. A cartogram is a representation "in which the geographical map shows the totals or the ratios of the different units by various inserted diagrams and hexagrams" (see GRAPHICAL METHOD).

[Paper by E. Levasseur, "La Statistique Graphique," *Jubilee Volume of the Statistical Society*, London 1885.—*Annals of the American Academy*, Supplement, May 1891, "The History, Theory, and Technique of Statistics," by A. Meitzen.]

CARUCAGE. A tax levied on the carucate, the amount of land cultivated by one full plough team of eight oxen. It has been asserted that the carucage was levied on the plough (caruca), and that a tax levied on the carucate of land was neither a carucage nor so termed by contemporary authorities. That the mention of the carucate was much earlier than that of the carucage can hardly be doubted. Equally surely may it be surmised that contemporaries recognised a tax levied on the carucate as a carucage (Leland, *Coll.* p. 223). The point is one of considerable importance. In the first place were the incidence of the carucage on the plough, not on the soil, valuable information would be furnished as to the steps in the transfer of taxation from "land" to "movables" (cp. SCUTAGE and KNIGHT'S FEE). In the second place the discussion as to carucage has included a close investigation of the circumstances of the tax levied by Richard I. in 1198 towards the payment of his ransom (*Eng. Hist. Rev.* iii. 501, 702; iv. 105). Though this levy has been customarily spoken of as a carucage, there is no doubt that it is not so referred to in documents of the time; there is equally no doubt that it was levied on the

carucate. Indeed, its chief importance in the history of taxation lies in the fact that it was levied after a new and careful survey of the country had been made, whereby the actual ploughland was to be substituted for the nominal HIDE "as the unit of taxation." In this aspect it marks an important stage. The carucate contained four bovates, and has been estimated from Fleta as comprising 160 acres in a two-course, and 180 in a three-course MANOR.

[*Eng. Hist. Rev., op. cit.*; Dowell, *History of Taxation*, vol. i. ch. v.; Madox, *Exchequer.*]

E. C. K. G.

CARY, JOHN (died soon after 1719), an influential Bristol merchant, author of *An Essay on the State of England in Relation to its Trade, its Poor, and its Taxes*, 1695, which LOCKE calls "the best discourse I ever read on that subject," and speaks of "the undoubted evidence of most of it" (Letter to Cary, *Brit. Mus. Addit. MS.* 5540, p. 70). This work was reissued several times, with alterations, and under different titles—*An Essay towards Regulating the Trade and employing the Poor in this Kingdom*, 1717 and 1719; *A Discourse on Trade*, 1745. It was translated into French, 1755, with additions said by M'CULLOCH to be improvements, and retranslated into Italian 1764. Some extracts from Cary's work were published separately, and some tracts originally separate have been bound up with the main work.

The most valuable part of Cary's work is perhaps that which relates to the employment of the poor, for which purpose he proposed a combination between parishes (Essay *sub finem*, appendix to *Discourse*). Correct views on the relation between the quality of coin and the exchanges are found in the tract *On the Coin and Credit of England*, 1696 (see Macleod, *Dictionary*; also *Banking*, vol. i. p. 403). In *An Essay towards Settling a National Credit*, 1696, a national bank is proposed. Other recommendations embody the doctrines of protection and the balance of trade in their most specious forms. BULLION imported "adds to the wealth of the nation" (*Essay*, pp. 2, 116), but not so much as raw material, "the subject matter of a great manufacture." The difficulty of applying these principles is illustrated by Cary's observations on different branches of British trade. He reckons that England loses by the East India trade (see CHILD), and wishes fashion would encourage native woollens rather than Oriental calicoes (*Essay*, pp. 52-65). He would discourage the Irish woollen manufacture in the interest of Ireland as well as England (*ibid.* p. 91). He would encourage the Irish linen manufacture (*Essay*, p. 109, appendix to the *Discourse*) and the export from Ireland both of raw wool and of cattle and other agricultural produce (*ibid.* p. 107). He would "open" the African trade in negroes, "being indeed the best traffick the kingdom hath, as it doth occasionally give so vast an employment to our people both by sea and land" (*ibid.* p. 75).

Some of these topics are discussed in letters to and from Cary, *Brit. Mus. Addit. MS.* 5540.

F. Y. E.

CASAREGIS, JOSEPHUS LAURENTIUS MARIA DE, born 1670 at Genoa, died 1737 at Florence.

The author of the *Discursus legales de Commercio*, Flor. 1719-29, and of a treatise bearing the title; *Il cambista instruito per ogni modo di fallimenti*, Venezia, 1737.

M. P.

CASE OF NEED. See BILL OF EXCHANGE.

CASH. MONEY: CIRCULATION: CURRENCY. All that may be reckoned as equivalent to money, or the owner can at option obtain possession of in money on demand. Thus coin, bank-notes, postal notes, bankers' balances on current account, and cheques to bearer, may all be reckoned as cash in the country where they are current, their instant convertibility into currency being alone requisite to bring them under the designation "cash." It is evident from this that cash and money are words having a very different signification. The money in a country in coin is a determinable quantity; the cash resources of the community are in this country nearly as much greater than the actual money in circulation as the banking deposits are greater than the cash actually held by the banks holding those deposits. It may safely be assumed that all who are possessed of banking accounts hold the bulk of their cash in their bankers' hands, and estimates can be formed, from statistics available, of all these descriptions of cash in the hands of the public. If, therefore, bankers' current accounts, say half their deposits, are included, the "cash" resources of this country in 1914 may be briefly estimated as:—

Gold in circulation	£100,000,000
Silver ,,	25,000,000
Bronze ,,	5,000,000
Postal notes and orders	2,000,000
Banking accounts current	600,000,000
Bankers' notes and drafts at sight	50,000,000
Total cash resources U. K.	£782,000,000

The coin in circulation excludes that in bankers' hands, and the banking accounts exclude money at notice. The coin in the banks is excluded from the gold in circulation because it is represented in the accounts current, and cheques outstanding are included in the same item. Estimates at a later date would substitute "currency notes in circulation" for the item "gold in circulation." For the different forms of Cash, reference should be made to the articles BANKING; BANK NOTE; CHEQUES, LAW OF.

CASH (or LI). The lowest denomination of the Chinese money of account; a brass coin; the only coin as yet issued by the Chinese government. Nominally 1000 cash = 1 TAEL (the unit

of value), but in consequence of successive reductions in their weight they are now only received in circulation at from one 1600th to one 1800th of a tael. By a proclamation in 1889, cash from the Canton mint were ordered to be received at their nominal value, one 1000th of a Tael. This was disregarded. The decree of May 1910 fixed the silver dollar, suggested value two shillings, as the unit of the currency. F. R. A.

CASH ACCOUNT. A record of current cash receipts and payments, usually kept in a book termed the cash-book. Hence it follows that the difference between the one side of the account and the other exactly represents the cash balance to date, and available for all current purposes. This account is essential for purposes of book-keeping, and in important businesses its total should be made day by day to agree with, and in fact be the same as, the current account at the bank; as of course it will when all receipts are paid into the bank, and payments are made by cheque. The auditor, for instance, who thus has all the receipts and payments for a given period verified by the pass-book, together with the balances owing and receivable at the date of closing the accounts, is at once placed in a position to construct a revenue account for the period under consideration, and possesses a general voucher as to the accuracy of the cash transactions entered.

Some further description of the *cash-book*, however, is necessary. In its simplest form it is ruled for debtor and creditor entries—the first column for the entry of the date; the second for the entry of the description of the receipt on the one side, or payment on the other side; the third for the entry of the ledger folio; and the fourth for the pounds, shillings, and pence received or paid under that particular head. Many cash-books, however, are ruled with a considerable number of cash columns, so as to separate and classify the different items of receipt and payment. For instance, the cash-book of a gas company may contain on the receipt side four columns representing so many collecting districts, a fifth column for cash received for sales of coke, a sixth column for residual products and miscellaneous, and a seventh column for the weekly totals. On the other side there would be six columns recording different descriptions of wages and salaries, coal, buildings, implements, and repairs of mains, and the weekly total; the account thus arranged would be regularly examined by the board, and compared with the corresponding periods of previous years. The cash-book in this instance indicated much more than the simple receipts and payments of money: it indicated the progress made in each district and in all branches of their operations. This is but an illustration of what a properly constructed cash account is made to show.

CASH CREDIT. In Scotch banking, a mode of advancing money by permitting an account current to be regularly operated on and overdrawn up to a certain specified limit. The advances are secured to the bank by two cautioners or securities, and interest is paid on actual overdrafts. In earlier years this method of advancing served largely to develop commercial enterprise in Scotland, but during recent years the country has become richer and the Scotch banks have, since they set up branch offices in London, applied themselves to negotiating bills at current market rates rather than to employing money in cash credits. A. D.

CASH, SALE FOR. On the stock exchange bargains are sometimes done for cash as distinguished from payment and delivery on the succeeding settling day. That for CONSOLS is the only market on the London stock exchange in which a broker, asking for a price, would receive a quotation "for cash." This "consol market" includes Metropolitan Board of Works stocks, Indian sterling stocks, also Colonial inscribed stocks. In other stock markets the quotation would be for purchase or sale on the date of the next settlement. A. E.

CASHIER. In English banks and offices the clerk appointed to take charge of the cash is designated by this title, occasionally by that of "teller." For convenience sake the work is sometimes divided between receiving and paying cashiers. The duties of the office require intelligence, quickness, and firmness, with a pleasant manner of addressing people. The position differs in some banks. The chief officer, the general manager of a bank as he would more usually be termed, is sometimes spoken of as the cashier. In the United States the cashier is spoken of much in the same way. Horton, C. J., has remarked, "The cashier is the executive of the financial department of the bank, and whatever is to be done, either to receive or pass away the funds of the bank for banking purposes, is done by him or under his direction; he therefore directs and represents the bank in the reception and emission of money for banking objects" (Asher *v.* Sutton, 31 Kan. p. 289, quoted in American *Banker's Magazine*, July 1889). The care and management of the property of the bank, and the conduct of its business in the usual and ordinary way are in these circumstances among the duties of the cashier; their scope is in England restricted usually in the narrower sense.

[J. W. Gilbart's *Practical Treatise on Banking*. —G. Rae's *Country Banker*.—J. Hutchison's *The Practice of Banking*.—The English *Banker's Magazine*, and the American *Banker's Magazine*, *passim*, may be cited.]

CASTE. This word is derived from the Portuguese *casta* "white, pure;" and is used by Europeans as the name of an institution

which they believed themselves to have found in the East Indies. There is no native word exactly corresponding to the idea formed by Europeans; but *jāti* "birth," and *varna* "colour," supply its place. In the oldest records of the Aryan race in India, that is the oldest hymns contained in the Vedas, there is no mention of caste. It is in a celebrated hymn called the Perrusha Sūkta, which is in a later appendix to the older ones, that we first find a reference to the four principal divisions of Indian caste:—the Brahmins, the Kshatriyas or nobles, the Vaishyas or peasantry and traders, and the Shūdras or servants. But caste itself, as an institution, is neither mentioned nor even inferred in the actual words of the poem, which may be dated approximately at about 800 B.C. In a passage repeated in both recensions of the Gajur Veda we have a long list of seven hundred and sixty divisions into which the people of India were then divided. It is very interesting as containing many names (partly of trades, partly of tribes) which afterwards became caste-names. But that it is not a list of castes is clear from the fact that it includes also a number of such divisions as thief, back-biter, dwarf, leper, red-eyed man, barren woman, and so on—a classification quite independent of the idea of caste. From that time onwards each later Hindu book shows a marked growth of the development of caste feeling, until in the law book of the Mānavas, also called the Laws of Manu, which may have reached its present shape about a century before our era, we find the institution of caste, as at present understood, in full vitality. Important privileges are accorded to men of the higher castes; crimes are punished, not only according to the nature of the crime, but according to the caste of the criminal;—it may be inferred, though it is nowhere actually stated, that occupations are usually hereditary and dependent upon caste;—caste is lost by eating or drinking, and of course by sexual intercourse with the lower castes; marriage is restricted by the distinctions of caste; and to lose caste altogether, to become an "outcaste," has become almost the greatest of disasters. On looking more carefully, however, into the castes mentioned in Manu, sixty in number, we find them to be mostly different not only from the castes now actually existing, but also from the quasi-caste names in the early list of divisions of the people mentioned above, and in other similar lists found in the Milindu and in the Rāmāyana (which are somewhat later than Manu). This is to be explained by the fact that the caste divisions of the many peoples in the great continent of India have, from the first, been constantly though slowly changing. The institution has remained, and remained with similar restrictions. But the lines of the division have varied. The history of each caste requires, indeed, to be separately examined; and examined from each of its various sides—as a trade guild, as a racial division, as a circle within which marriage is permitted, as a community with legal powers over its own members, even as a religious sect. The commonly-received notion of "The immovable East" is due simply to the ignorance of Western writers. And there is no better example of the mistakes into which that idea may lead us than the conception of an iron system of caste whose bounds none may pass over. When the Dutch began cinnamon planting in Ceylon they were in need of labourers, "coolies" as they are called, "men working for hire." A peasant in India looks upon the labourer for hire as a disgrace. Those, of whatever caste, whose necessities drove them to accept the terms offered, were looked down upon. And so rapid was the effect of this feeling that in a couple of generations an entirely new caste was formed, that of the "cinnamon-peelers." For nearly a century the trade flourished, and their numbers increased. For the last seventy years the trade has steadily diminished. But the caste, the members of which are now engaged for the most part in other occupations, remained. Throughout its short but most instructive history it had never been (as the majority of the castes have been) identical with a division of race. For some generations it had fulfilled many of the functions of a trade guild and of a trades union, functions now only feebly surviving. But it is still in full vitality as a restriction on marriage, and as an index of social position. This instance has been chosen because all the facts are ascertainable from the official documents of European administrators. But a comparison of the lists referred to above, and of lists of the different castes now existing in different parts of India, show that it is only a sample of many changes that have occurred in the caste-system of that continent. There are about one hundred and fifty castes to-day in the Bombay Presidency. No one has yet attempted to write their history. It is probable that most of them are, as castes, of comparatively recent origin, and each one of the one hundred and fifty must be considered apart from the others in order to ascertain the vitality of its caste powers and feelings in respect of race, of religion, of trade, and of family ties. There are numerous instances in the books of transition of an individual from one caste to another. It is quite common for a man of one caste to follow the occupation usually assigned to another. And there are, on the other hand, trade guilds independent of caste; and castes within castes, so far as marriage is concerned. Even among the Brahmins, very few can trace their descent from pure Brahmins. They are split up into innumerable exogamous *gotras* or families, some of which are not Brahmins at all by descent.

And they follow every imaginable sort of occupation except only those assigned to certain of the lower castes. Certain Beldars, for instance, excavated as navvies the now sacred lake of Pushkara or Pokhar in Marwar. Their descendants rank as Brahmins, have raised the pick-axe into an object of worship, and are found to the number of twenty or thirty thousand, throughout Rajputana and Sind, as a special *gotra* called the Pokhar Brahmins. Each of the constantly recurring religious movements in India has had a profound influence on caste. Many of the greatest leaders, from Gotama the Buddha downwards, have commenced by protesting against caste distinctions, and entirely abolishing them within the inner circle of their more ardent followers. Caste among the laymen of the new communities was for the most part left undisturbed. But, though in different degrees, the new religious communities became themselves the source of new caste divisions, and people of the same caste, but of different religions, ceased to intermarry. It will be seen that the subject of caste in India is one of very great complexity. Dr. Wilson of Bombay had intended to undertake the gigantic task of bringing order into the chaos of our knowledge of the subject. He died when the work, though he had laboured at it for years, was really only begun. There were published, however, two volumes entitled *Indian Caste* (Blackwood and Sons, London and Edinburgh, 1877, pp. 450 and 228) in the first of which he has collected together all the references to caste he could find in Hindu literature from the Vedic times downwards; and in the second of which he attempts to trace in detail the history and the present occupations of one caste only, that of the Brahmins, in all its numerous details. Even that is confessedly imperfect; and there is no other work in which even an attempt has been made to explain either the past history or the present position of any of the other castes. Various details as to the numbers of the different castes, not in India as a whole, but in particular districts, can be found in the local Gazetteers and Census reports of the Indian Government. But they have not yet been properly summarised or analysed. It would be undesirable, in the present state of our ignorance of the subject, to attempt to form any estimate of the economic influence of the caste system. It is doubtful to the writer whether it has really had any practical effect in restraint of trade. But the few words here devoted to the subject may remove some misconceptions, and the numerous authorities quoted by Dr. Wilson will assist those who wish to investigate the problem further. T. W. R. D.

CASUEL. A general term in France for a revenue which was not fixed, but proportioned to the performance of work. It was specially applied to the fees charged by the clergy for baptism, marriage, burial, and the other sacraments of the Roman Catholic church. R. L.

CASUS. An expression used by Roman lawyers to express events which could not have been avoided by the strictest amount of diligence required by the law in ordinary cases. The expression does not quite correspond with the English "Act of God," which is the equivalent of the Roman *vis major*, and includes those events only which could not by any amount of care have been foreseen or controlled under the special circumstances. E. S.

CATALLACTICS, or the Science of Exchanges, is a name proposed by Archbishop WHATELY as conveying a much better idea of the nature of economic science than is conveyed by the name political economy. Other writers, *e.g.* Mr. H. D. Macleod, have also regarded the exchange of wealth as constituting *par excellence* the subject-matter of the science. More generally, however, it is held that while the laws of exchange occupy a fundamentally important place in economics, the science is equally concerned with the laws of the PRODUCTION, DISTRIBUTION, and CONSUMPTION of WEALTH.

A *Catallactic* community has been defined as one in which individuals freely exchange commodities one with another, each with a view to making the enjoyment he derives from his possessions a maximum.

[An anonymous treatise was published in London, 1842, entitled *Letters on the rudiments of a Science called Catallactics.*] J. N. K.

CATASTO. Taxation in mediæval Florence was an important political weapon, because it was based upon an arbitrary assessment of real and personal property. Thus the party in power could ruin its political opponents by excessive taxation. In 1427, when the oligarchical party had the upper hand under Rinaldo degli Albizzi and Nicolo da Uzzano, the opposition, headed by Giovanni de MEDICI, endeavoured to reform this abuse by securing the adoption of the *catasto*. The object of this reform was to obtain a careful and impartial registration of property, so that the incidence of taxation should depend upon wealth alone, and not upon political opinion. Every citizen was to make a return to the gonfalonier of his district of his whole income, from whatever source. His income from capital, whether fixed or circulating, was to be reckoned at 7 per cent. If a man concealed anything the penalty was confiscation. These returns were to be collected into four books, one for each quarter of the city. The assessment of taxes, which was to be strictly based upon the record of these books, was entrusted to a commission of ten, who were elected out of sixty citizens chosen by lot. A new *catasto* was to be made every three years.

This admirable reform was abrogated by

Cosimo de Medici, the son of Giovanni, to whom Machiavelli ascribes the chief credit of the change. Cosimo, who overthrew the oligarchy in 1434, and laid the foundation of the Medici dynasty, returned to the system of arbitrary assessment. It was said of him that he used the taxes as the northern despots used the dagger. His object, however, was not only to ruin his opponents, but also to conciliate the lower classes by diminishing the burden of taxation upon them and throwing it upon the rich.

[Machiavelli, *History of Florence*, bk. iv. ch. iii. Gino Capponi, *Storia della Republica di Firenze*, libro iv. cap. vii.] R. L.

CATTANEO, Carlo, born 1801 in Milan. He wrote frequently in the *Annali Universali di Statistica* and in the *Politecnico*. He distinguished himself in the defence of Milan in 1848, against the Austrians, but was a federalist, opposing the union of Lombardy with Piedmont. He was elected three times a deputy, but never sat in Parliament, because, as a republican, he refused to take the oath. He died in 1869 at Castagnola, close to Lugano. His works are as yet only partially published. His principal subject was land tenure. Besides his economical writings, in which he shows himself a decided opponent of List and his system, he wrote historical and literary compositions of value.

Among his writings are the following: *Notizie naturali della Lombardia*, Milano, 1844.—*Storia della rivoluzione del* 48, Lugano, tipogr. Svizzera, 1849.—*Ugo Foscolo e l'Italia*, Milano, 1861.—*Della pena di morte*, Milano, 1860.—*Alcuni scritti*, Milano, 1846-47, vol. iii.—*Borroni e Scotti.—L'Italia armata*, Milano, 1861. M. P.

CATTLE DISEASE ORDERS. By the 57 & 58 Vict. c. 57, and its amending Acts, important duties are imposed upon the Minister of Agriculture and upon Local Authorities for the prevention of contagious diseases amongst animals. Extensive powers are given to the Minister to make "orders" for this purpose, *e.g.* the Minister may declare what places are infected areas, regulate the destruction or movement of animals in or out of such areas, and prohibit or regulate the importation, quarantine or slaughter of animals coming from foreign countries or from Ireland (see Diseases of Animals Acts in Appendix). W. P. S.

CAUTION (Scots Law Term). In Scotland the law has been very largely assimilated to that of England. No consideration need be proved, and the period of limitation is seven years from the date of the bond of caution, at the end of which time the surety, if known to the creditor to be a surety and not a principal, becomes free, unless the creditor shall then have begun execution proceedings against him. When sureties become bound by way of collateral security, each for the performance of the whole of an obligation, the Scottish rule is that the creditor can rank for the whole upon the estate of each, but not so as to do more than draw full payment of the debt.

[Bell's *Commentaries on the Law of Scotland*, ii. 416.] A. D.

CAUTION. Security given in the course of judicial proceedings. The word is not used in England except in the practice of the ecclesiastical courts; in Scotland it is a regular term of art used in acts of parliament and legal documents. In the French language the word caution is equivalent to the English Guarantee, and is used to express the security as well as the person acting as surety.

[*Fournir caution de payer les frais*, *Code de Procédure civile*, § 166.—*La solvabilité d'une caution*, *Code civil*, § 2019.] E. S.

CAVEAT. An expression used in the procedure of the probate, divorce, and admiralty Division of the High Court. A person wishing to dispute the validity of a will, by entering a "caveat" compels the executors to bring an action to obtain probate. In admiralty proceedings a person can prevent the arrest of his ship or cargo by entering a "caveat," if at the same time he undertakes to appear in the action and gives security in accordance with the rules of court. E. S.

CAVEAT EMPTOR. A maxim of the common law applicable to sales of personal property as regards the quality of the things sold. The buyer (in the absence of fraud) purchases at his own risk unless the seller has given an express warranty or unless a warranty be implied from the nature and circumstances of the sale. The rule does not, however, apply if the buyer has had no opportunity of inspecting the article bought. Hence, where a chattel is to be made or supplied to the order of the purchaser, or where it is sold by description or by sample, or for a particular purpose, the law implies a Warranty.

[*The Sale of Personal Property*, by J. P. Benjamin, Q.C. 4th ed. London, 1888.] J. E. C. M.

CAVOUR, Count Camillo Benso di (1810-1861), can be considered in this place only as an economist. His career as a statesman lies outside our boundaries. A few biographical remarks will, however, not be out of place. Cavour, like the sons of all the Piedmontese nobility, was placed in the military academy as soon as of age to be received there. He left this school at eighteen as a lieutenant in the Engineers, and was sent to work at the fortifications of Genoa. He had a particular talent for mathematics, and one of his teachers, the well-known Plana, desired him to devote himself to pure mathematics, telling him he would rival Lagrange. Cavour's answer, eminently characteristic of the man, is preserved in his correspondence: it is to the effect "that

mathematics are not the thing required just now, but economics." Much later (14th December 1849) Cavour wrote in the *Risorgimento*, "The greatest problems our time is called upon to solve are not political ones, but social ones; questions relative to the forms of governments are quite secondary, compared with those reflecting the economic position of society." Cavour left the army in 1831, after having been punished for speaking out too freely on political matters. This misadventure turned out to be his good fortune; it caused him to travel in Switzerland, France, and England, where he remained several years and formed himself as an economist. He is in this respect a disciple of CHERBULIEZ, of P. ROSSI, and of what is now called the CLASSICAL SCHOOL. His writings and his speeches abound with quotations from RICARDO, and he wrote an essay in defence of MALTHUS. In one of his first writings, *On the State of Ireland*, he speaks of England in the following terms: "From St. Petersburg to Madrid, in Germany and in Italy, the enemies of progress and the friends of revolution alike consider England as their greatest obstacle. The one set regards England as the hearth upon which all revolutionary flames are kindled, the refuge and citadel of all the subversionists. The other, perhaps more truly, considers the English aristocracy as the central pivot of the European social system and as the greatest obstacle their democratic tendencies meet with. This hatred which England meets with from all extreme parties ought to endear that country to the intermediate ones, to all men who wish for the moderate progress, and for the gradual and regular evolution of humanity, *i.e.* to all men who from principle are opposed alike to all violent tempests and to stagnation in social affairs. But this is not the case. The motives which might lead them to sympathise with England are counteracted by an enormous mass of prejudice, old tales, and old passions, whose force is nearly irresistible. Therefore there are but few men, scattered here and there and solitary, who feel for the English Nation that esteem and that regard which ought to be inspired by one of the greatest nations which has distinguished mankind,—a nation which has effectively co-operated in the moral and material development of the world, and whose mission of civilisation is very far from being at an end." Cavour's admiration for England and English thought was a subject for which he was often attacked. But he had been trained from his youth upwards to stand fearlessly isolated by his opinions from his countrymen and to face their opposition. His family circumstances were at first a formidable obstacle to his rising rapidly to the front. His father was what would now be called the chief of the police, and as such had many a disagreeable duty to perform. The nobility, to the very highest ranks of which Cavour belonged by birth, looked down upon him as the son of the councillor of an unpopular king, and of a man who exercised a somewhat despised calling; by the middle classes he was, if not hated, certainly received very coldly for the same reason. Besides this, his independence of thought, which led him not to agree either with the aristocratic or the democratic party, put him for a long time between two fires, with no friends to back him. And in parliament, when he first entered it, the fact that he did not stick to any party, and sometimes supported the government and sometimes the opposition, was at first harshly judged, and only appreciated when people came to understand that Cavour was a new leader, with a programme of his own. As a minister he continually showed unusual courage in expressing, without any regard for the prejudices of his audience, his scientific convictions on economic questions, he even ventured to explain in the chamber economic theories—rebuking those who affected to despise theory. As an example of the high tone of parliamentary discussions under his leadership, and of his sincere respect for science, not concealed from an assembly which, also in those times, often declared economical laws good for some other planet than our own, the following passage of a speech of his, made in defence of the treaty of commerce with France (8th April 1852), and in answer to Menabrea's attacks, may be quoted. Cavour spoke French on this occasion, as on several others, so as to be clearly understood by the Savoyards. The law would even now permit the use of French in the Italian parliament. The quotations from the speech which follows is therefore given in French; the reader will bear in mind that Savoyards, though fluent in that language, do not speak perfect French. "Et d'abord, messieurs, il est facile de démontrer mathématiquement, qu'une fois les principes du libre échange établis, si on veut procéder par degrés dans leur application, en suivant une marche rationelle et logique, on devrait les appliquer d'abord aux produits de l'agriculture avant de les appliquer à ce qui a rapport à l'industrie manufacturière. Malheureusement, pour faire cette démonstration, je serai obligé de recourir pendant quelques instants aux lumières de la théorie. J'en demande bien pardon à M. Menabrea, mais je ne puis m'empêcher de lui manifester l'étonnement que j'ai éprouvé, voyant un homme aussi savant que lui, un membre de l'Académie des Sciences, manifester un si superbe dédain pour les théories, et surtout pour la théorie de l'économie politique qui a tant d'affinité avec celles des sciences exactes, qu'il possède si bien et qu'il professe d'une manière si distinguée. Car, messieurs, le système protecteur a des conséquences bien plus funestes lorsqu'il est appliqué aux produits

du sol, que lorsqu'il est appliqué aux produits de l'industrie. Le système protecteur appliqué à l'industrie n'a qu'un seul effet fâcheux, celui de détourner les capitaux et le travail national des industries naturelles pour les pousser vers des industries factices, où les capitaux et le travail trouvent un emploi moins productif. C'est là un inconvénient grave sans doute, mais qui est restreint à cette quantité de capitaux et de travail qui par l'effet de la protection sont détournés de leur voie naturelle. Et encore cet effet est-il atténué par la concurrence intérieure qui, au bout d'un certain temps, ramène le taux des capitaux et celui de la main d'œuvre des industries privilégiées au niveau des profits et des salaires des industries qui ne le sont pas. Mais le système protecteur appliqué à la culture du sol a des effets bien plus étendus, et, je n'hésite pas à le dire, bien plus funestes. En effet, lorsque par la suite d'un droit protecteur, vous élevez le prix des produits du sol, le prix du vin et du blé, par exemple, qu'est-ce qu'il arrive? Il arrive deux choses: en premier lieu certains terrains qui n'étaient pas assez fertiles pour produire du blé ou du vin dans les conditions antérieures du marché, sont mis en culture, ou bien encore, on consacre à la terre des capitaux et du travail qui n'aurait pas été productifs si le prix n'avait pas varié. Cette première conséquence du système protecteur appliqué à l'agriculture est analogue à celle que j'ai signalée lorsqu'il a pour objet l'industrie manufacturière. C'est-à-dire qu'il y a une certaine masse de capitaux et de travail, qui reçoivent une destination moins productive qu'ils n'auraient reçus si les choses avaient été abandonnées à leur courant naturel. C'est là un inconvénient grave qui cependant n'aurait pas une grande portée, si l'élévation des prix des produits du sol n'avait d'effet que sur les produits des terrains nouvellement mis en culture ou des capitaux et du travail additionnels consacrés à l'exploitation des terrains depuis longtemps défrichés. Mais l'élévation factice des prix s'étend aux produits de tous les terrains, à ceux d'ancienne aussi bien qu'à ceux de nouvelle culture. Qui est-ce qui profite de cette élévation? Lorsqu'elle a lieu elle se partage entre les propriétaires et les fermiers, surtout si ceux-ci sont en possession de long baux: après quelque temps, le profit se concentre tout entier entre les mains des propriétaires. Ainsi donc, le système protecteur appliqué aux produits du sol a pour effet, d'une part, de pousser ainsi que le fait le système protecteur industriel des capitaux et du travail, dans une voie peu productive, et de l'autre d'augmenter la rente des terrains précédemment cultivés aux dépens des consommateurs. Ce qui en définitive constitue un véritable impôt supporté par les consommateurs au profit des propriétaires. . . ."

Cavour also ventured occasionally to give parliamentary discussions an academical tone, quoting economic authority, as in the following instance: "It is my opinion, in accordance with that of all the most enlightened people in England, and not alone with the men of the present generation, but with the economists who have preceded the present generation, with A. Smith and Ricardo and his followers, that England has prospered, not in virtue of the protective system, but notwithstanding this system. . . . If you examine English industries you will see that those which have been least protected are precisely those which have succeeded best. . . . The progress of English industry has always been in an opposite ratio to the degree of protection it received. The silk industry (strongly protected) remained nearly stationary; the woollen industry progressed slowly, and the cotton industry, which was hardly at all protected, grew gigantically. I therefore maintain that protection in England not only has failed to aid the increase of wealth, but has even been a hindrance to it." Thus he explained to the chamber the economic principles as to the basis of wages:—"Le taux des salaires, selon les principes non contestés de la science, se règle par la masse des capitaux destinés à payer les salaires, c'est-à-dire par la quantité de denrées de première nécessité à l'usage des classes ouvrières que possède la nation, comparée avec le nombre des bras qui cherchent de l'emploi." He further argued that Protection cannot augment capital, and therefore does not raise wages. All that Protection can do, he said, is to cause Capital to "flow rather in one channel of industry than in another. . . . And it does this by driving them (capital and labour) into the less remunerative branches of industry." The best example, however, perhaps which can be given of his scientific spirit in discussing practical problems in parliament is his definition of the individualist and of the socialist policy. "For reaching this goal (the amelioration of the economic condition of the lower classes) two ways are open for us. All the systems supported in modern times by the wisest and by the boldest men can be classified under two heads. The one school relies on the principle of liberty, on the principle of competition, on the free development of the morals and intelligence of men. Those who hold this opinion think that the larger the application of this principle is, the greater will be the welfare of all, but particularly of the lower classes. This is the school of economists, these are the principles held by the men who are in office, in England. Another school professes principles diametrically opposed to these. It believes that human misery cannot be alleviated, and that the condition of the lower classes cannot be ameliorated, unless individual action is limited, and the central action of the whole social body, represented by a government which has still to be created, is made more powerful, and concentrates all individual forces into itself

This is the socialist school. Now, no illusions must be indulged in: although this school reaches fatal and sometimes even atrocious conclusions, it cannot be denied that there is something in its principles which captivates many generous and elevated minds. And the only way to combat this school, which threatens to invade all Europe, is to oppose principles to principles. In economics as in politics, as in religion, ideas can only be fought by other ideas, and principles by other principles; forcible repression is useless. For a short time guns and bayonets may repress theories and maintain order; but if these theories find entrance with the intellectual class, you may be sure that they will thrive and triumph. Now, I say that the strongest ally of socialism is protection. Both start from the same base. . . . Given the protectionist system, logic will compel you to admit, if not all, a great many of the doctrines of SOCIALISM."

When Cavour defended FREE-TRADE he gave in just as little to absolute protectionists as to fair traders; he explained on more than one occasion that if a foreign country commits the error of protecting its own industries, this is no reason for making the same error ourselves. Again, he argues with great acuteness "that if a nation has to undergo great sacrifices and to bear heavy taxation, it must be left the more unfettered in its commercial and industrial activity, so as to bear the weight easier." The best protection, he repeatedly declares, is the maximum of liberty. "It is my opinion that those elements of production and of prosperity which we possess, ought to be left to develop themselves unfettered; that neither agriculture, industry, nor commerce ought to be protected. I believe firmly that the greatest encouragement is to be had from the greatest possible amount of liberty: 'che il massimo degli incoraggiamenti sia il massimo della possibile libertà.'" This speech of his marks distinctly Cavour's position as an economist.

The success of Cavour's speeches in a parliament in which even men of the greatest merit ignored the most elementary truths of political economy, was due to his unmatched knowledge of commercial and technical details. This enabled him to give each man the right *argumentum ad hominem* which would bring home to him the theory under discussion. He was himself a practical agriculturist, and a very successful one into the bargain. This gave him a high authority with all those deputies who were also landlords and knew he could beat them in any practical question. And he liked to quote, on the right occasion, instances of personal experience in agricultural matters. To his mind, highly speculative as it was, sophistry and legal casuistry were completely alien; he would appeal to historical facts, recent and ancient, and generalise skilfully on them; he would show the interests of different parties, explain their actions by their motives; but he would not stoop to play with the sense of words and base political action on some legal nicety—a method of reasoning very frequent in Latin countries, in which parliaments are largely composed of lawyers. Naturally he was the object of much sarcasm. At one time he was called "Lord Camillo," and from the name of the journal which he had founded and was directing "My Lord Risorgimento," to ridicule his Anglomania. *Risorgimento* means resurrection, and is here used in the sense of political resurrection or revival. Cavour was no orator, he had always to win his way by the weight of the matter of his speeches. His voice was disagreeable, his tone harsh, and he had some difficulty in finding the proper words rapidly. But he was first-rate in reply and at making a good pun, and was seldom worsted in debate. When Cavour was not allowed to answer an opponent in the Chamber, because his turn to speak was past, he employed MIRABEAU'S system, publishing the same evening or the next morning his answer in the "Risorgimento." This journal is therefore one of the great sources of information concerning his economic and political views, together with the collection of his speeches (eleven volumes published by Botta at the expense of the government), his correspondence (five volumes edited by Chiala and published by Roux, Turin, 1881-86), and his *Ouvrages politiques et économiques* (published in 1885 by Galimberti, Coni). His best known economical pamphlets are:—the memoir already quoted, *Sur l'état actuel de l'Irlande et sur son avenir.—Des idées communistes et des moyens d'en combattre le développement.—Des chemins de fer en Italie.*—He wrote *Sur l'Influence de la politique commerciale de l'Angleterre dans le monde économique* (in the Review l'Antologia), and a pamphlet on Prof. Ferrara's inaugural address on Political Economy. As an economist Cavour contributed nothing to the theory of the science. He is rather one of those who are well acquainted with the state of science in their time, and utilise it for practical purposes. His opinions in economic matters may be summed up as those of the MANCHESTER SCHOOL, as the Germans qualify ORTHODOX political economy (*Manchesterthum*) when it is accompanied with an optimistic view of the effects of natural laws, and reduced to the basis of absolute LAISSEZ-FAIRE and LAISSEZ-PASSER. M. P.

CAYLEY, EDWARD, author of the tract, *Corn trade, Wages, and Rent*, 1826; a plea for protection backed by some curious statistics (see pp. 8, 16, 31). F. Y. E.

CEDULA. A Spanish word, used on the London stock exchange, chiefly to describe certain guaranteed bonds issued by Argentine banks, corresponding to loans made by these banks against land to proprietors in various Argentine provinces. The word originally meant something ceded, and has reference probably to the land or property which has been ceded as security for the advances made by the Argentine banks. A. E.

CENS. The French term for a QUIT-RENT; but it has a special meaning in the history of France. DE TOCQUEVILLE has shown the error

of supposing that SERFDOM survived in France until the Revolution. Most of the French peasants in the 18th century held their lands, either as proprietors or as METAYER tenants. In the former case, however, the lord still retained the *cens*, or quit-rent, as a symbol that he retained the ownership, though he had parted with the property of the soil. The *cens* was almost invariably a fixed sum, arranged at the time of the original bargain, and had become insignificant in the 18th century, owing to the decline in the value of money. For this the lord was, to some extent, compensated by the *droit de lods et ventes*, by which, every time the land changed hands, the lord was entitled to a share in the purchase-money, usually a twelfth, but sometimes as much as a fourth.

[De Tocqueville, *France before the Revolution* (London, 1873), note lxxvii.] R. L.

CENSUS*may be defined as an enumeration of the persons in a country, and in each of its principal classes: such as those constituted by sex, age, occupation, and so forth. An enumeration of houses and other property is often included. The institution is very ancient. Its existence is evidenced by several passages in the Old Testament (Exodus xii. 37; Numbers i. xxvi.; and 2 Samuel xxiv.; 1 Chronicles xii. 23, xxi. 2-3, xxiii. 3-5; Esdras ii. viii.; Nehemiah vii. ix.) The ancient Egyptians and the ancient Persians were not without a sort of census (*Herodotus*, bk. ii. ch. cxix. clxxvii.; bk. iii. ch. lxxxix.-xc.) In Greece there were enumerations of the citizens for political purposes. In Rome the census was instituted in the age of the kings, and formed an important branch of administration down to the age of the emperors. It is recorded that Augustus wrote out with his own hand a *Breviarium totius imperii*, containing the number of citizens and allies in arms, the statistics of the fleets and provinces, and even the names of freedmen and slaves. The care of Augustus was imitated by his successors. In the ages which followed the fall of the Roman empire the most remarkable compilations of the nature of a census were the *Breviary* of Charlemagne and the DOMESDAY BOOK of William the Conqueror.

A more detailed notice of the census in modern times may be arranged under the following three heads: (1) The United Kingdom; (2) The Continent of Europe; (3) The United States of America.

(1) The first census in England was in 1801. An abortive attempt to introduce a census had been made in 1753, when Thomas Potter introduced a bill for taking and registering an annual account of the total number of marriages, births, and deaths. The bill was violently opposed. Mr. Thornton, who spoke against it frequently, said: "I did not believe that there was any set of men, or indeed any individual of the human species, so presumptuous and so abandoned as to make the proposal which we have just heard." The bill, carried in the House of Commons, was thrown out by the Lords. In 1801 there was no opposition. The fear of exposing the paucity of our numbers had given place to a dread of over-population. Mr. C. ABBOT (*q.v.*), in introducing the Population Bill, said: "In times like these, when the subsistence of the people is in question, it is surely important to know the extent of the demand for which we are to supply."

It might have been expected that the new machinery would not work well the first time. But Mr. Rickman, one of the clerks of the House of Commons, the able superintendent of the operation, argues—in the reports accompanying the second and third censuses—that the return of the population is fairly accurate. The overseers of the poor, whose agency was employed, had good opportunities for ascertaining, and no motive for misrepresenting, the numbers. Errors in particular parishes would compensate each other in the aggregate. We may therefore accept a statement which, compared with the enumeration of 1881, shows that the population of England and Wales almost trebled itself during the first eighty years of the 19th century. Equal success did not attend another department of the first census. It was attempted to group the population by occupations into three classes: agriculture, trade, etc., and a residual class of others. But it was left uncertain whether the householder should speak for himself or his family. The want of uniformity in this respect rendered these returns almost useless. The statistics of the present were not the only object of the first census. It was attempted to reason backwards to the numbers of the population in the preceding century by means of entries in the parish registers—an attempt which had been initiated by GRAUNT in his *Bills of Mortality*, 1661, and sanctioned by LAPLACE in his *Théorie des Probabilités* (bk. ii. ch. vii.) The baptisms, marriages, and burials were obtained for several years of the 18th century. Then, as the number of entries in 1801 is to the (enumerated) population in 1801, so is the number of entries in any assigned year of the eighteenth century to the population of that year. Of the three kinds of record the marriages are the best for the purpose of this reasoning. Especially after the marriage act of 1754 there is reason to think that the registry of marriages is pretty complete. As Mr. Rickman puts it, "The solicitude of the female and her family, aided by the precision and severity of the marriage act" precluded omissions. Accordingly the reasoning may pretty safely be carried back as far as that date. As we go farther back there is danger that the reasoning may be falsified by a continual increase in the number of omitted entries. But Mr. Rickman's statistics

appear to establish that the danger is not fatal for recent periods (see Census 1821, Preliminary Observations, p. xxviii.) Altogether the retrospective census seems to establish certain broad statements, as that the population of England increased by about 45 per cent in the latter half of the eighteenth century, and that in the former half of the century the advance was much slower, and retarded by occasional retrogression (see Census 1821, Preliminary Observations, p. xxix. ; 1831, Preface, p. xlv. and 1851, Report, p. lxviii.)

The second census took place in 1811. The growth of the population during the decade 1801-11 was rather more than 14 per cent ; a rate of increase to which we later on returned, after exceeding it for one generation (1811-41) and falling short of it for another (1841-71). The mistake which had marred the first census was avoided in the second by counting the *families*, not the *persons*, in each of the three classes—agricultural, trade etc., and others. In 1821 questions as to age were first put. But it was left optional, both to the returning officer to ask the question and to the citizen to answer. The returns were fuller than might have been expected, eight-ninths of the total population enumerated. In 1831 the only return relating to age was the number of males aged twenty and upwards. In this year a more elaborate classification of occupations was introduced. One of the principal classes, trade, was subdivided into a hundred specifications. Into the compartments thus prepared the statistical matter did not flow very freely. Accordingly at the census of 1841 each individual was left free to declare his own occupation. The returns were made for the individual, not for the family, as previously. The inquiry as to age was again introduced in 1841 and made obligatory. This census had the benefit of the newly created registration office which supplanted the antiquated machinery of the parish registers. At the census of 1851 and on the two succeeding occasions, the advantage of Dr. Farr's collaboration was felt. The reports embody many of his valuable contributions to vital statistics. His scientific work is enriched with a vein of philosophical speculation and a wealth of literature, which do not often adorn parliamentary papers. To Dr. Farr is due the sixfold classification of occupations which is perhaps destined to be permanent—the professional, domestic, commercial, agricultural, industrial, and the unoccupied class. The grounds of this division are set forth by Dr. Farr in a note appended to the report for 1861. A special feature in the census for 1851 was an attempt to ascertain the extent of church accommodation and the size of congregations for the different religious denominations. In the same year conjugal condition was first made an object of inquiry. In 1861 there was a return of the number of houses containing one, two, or any assigned number of inhabitants, for twenty-four selected districts. In 1871 the first imperial census was taken.

The history of the census for England and Wales is nearly coincident with that of Scotland down to 1861, when a separate census for Scotland was first taken. A peculiar difficulty attending the Scotch census is caused by the definition of a house which the imperial authorities have adopted : "a distinct building, separate from others by party walls." This definition has been far from "distinct" to the provincial mind. A whole block of buildings have often been returned as a house. The statistics of the number of rooms to a family are more valuable. There are many contrasts between the results of the census in North and South Britain—for instance, the much greater preponderance of the female sex in Scotland—which cannot be adequately treated here.

The history of the Irish census deserves a separate notice. From the age of Petty to the beginning of the 19th century estimates of the population, based mostly on Hearth-Money, were attempted. If this method may be trusted, there were in Ireland at the end of the 18th century from four to five million persons ; that is about half the contemporary population of England and Wales. A census was instituted in 1812. But it was not successful, having been taken in different years and for partial districts. The Irish census of 1821 was more satisfactory Its result, in round numbers 6,802,000, compared with the contemporary population of England and Wales, 12,000,000, shows a relation very different from that which now prevails; the proportion of the Irish population to that of England and Wales being in 1821 about a half, in 1891 about a sixth. In 1831 and 1841 returns as to occupations were obtained on much the same lines as in England. But the answers were worked up into different *summa genera*. Families are divided into those who live by (1) capital in wealth or in professional knowledge ; (2) the direction of labour ; (3) manual labour. The somewhat indefinite second class comprised 50 per cent of the families in 1841. The difficulties of obtaining occupational statistics are illustrated by the incident that in the whole of Dublin only five coffin-makers were returned, whereas in a single street it was ascertained that there were twelve persons so occupied. Only one person in the Irish capital designated himself as an author! Great difficulties attended the preparation of vital statistics in Ireland. The number of births in any year used to be inferred by adding the numbers alive at each year of age to the numbers whose ages at death proved them to have been born in the year under consideration (Report for 1841, p. xl.) There is a large deficiency due to Emigration and imperfect returns of deaths. Still it is interesting to observe with what

accuracy the well-known proportion of male and female births comes out in the aggregates. The commissioners for 1841 claim to have made some contribution to the theory of that remarkable phenomenon. In the census of 1851 a gloomy feature was the decrease of population by almost 20 per cent, due to the famine of 1847. A decrease of 29 per cent is recorded for directors of labour, the second of the threefold division of occupations above mentioned. The decrease of population has continued ever since; the rate of decrease continually diminishing down to the last decade; when, as shown by the Preliminary Report for 1911, the decrease dropped from 5·2 per cent in the decade 1891-1901 to 1·5 per cent. Much the same distribution as in 1841 is presented by another classification of occupied persons as those ministering to food, clothing, and six other primary wants. In 1861 this classification is modified by the addition of twelve new categories. For example, out of 10,000 occupied persons 18 minister to religion, 5 to amusement, 1 to science and art, and 1816 to food. A feature of interest in the census of 1861 was the inquiry concerning the religious profession of the people. The proportions were, Roman Catholics 77·69 per cent; Protestants 22·23 per cent; not quite 1 per cent being left for Jews and unspecified. Of the Protestants a little more than half belonged to the Established Church. These proportions continue to be approximately maintained. The latest returns give Roman Catholics 73·9 per cent, Protestants (Episcopalians, Presbyterians, and Methodists) 24·5 per cent; Jews and other persuasions, as before, about 1 per cent. In 1871, as in 1861, the returns as to occupation are arranged both according to the English sixfold classification and the system grounded on the wants to which different occupations minister. The Irish commissioners defend the indigenous system with much warmth. The census of 1881 conforms to the English classification with more docility. The later censuses of Ireland deserve commendation for the completeness of the agricultural returns. The principal points to be noticed in the census of 1911 are—the smallest decline in population on record, a decrease in emigration, an increase in the number of houses, a general improvement in house accommodation, a decrease in poverty, and a decrease in the death rate (Sir W. J. Thompson, M.D., Registrar-General of Ireland, "The Census of Ireland, 1911," *Journ. of the Statistical and Social Inquiry Society of Ireland*, Dec. 1913).

A general idea of the scope and purpose of a census may be obtained by noticing the salient points in a particular report, that for 1901 for England and Wales being a good example. (1) *Number of the population and rates of increase.* The number slightly exceeded thirty-two and a half million. The rate of increase per cent was 12·17 per decade; greater by ·52 than for the preceding decade. The increase, determined by actual enumeration, differs little from the "natural increment" determined by subtracting the number of deaths from the number of births. Hence two methods of forecasting the future increase of population. Either we may observe the natural increment for the year or two immediately adjacent to 1901, and assume that this rate will remain constant for the following decade; or we may assume that the actual rate of increase for the decade 1891-1901 will continue to prevail for the next decade. A variant of the second method takes account of the fact that the decennial rate of increase is itself greater than in the preceding decade. The average of the results obtained by these three methods gives, as the probable population in 1911, over 36,400,000. The Report for 1911 records 36,075,269 as the actual population of England and Wales in that year. The *Economic Journal* for March 1911 contains a forecast of the census results worked out by two students of statistics from the recorded births and deaths and Board of Trade returns of emigrants and immigrants. The figures of England and Wales were put at 35,914,000, or about half a million less than the estimate given above, which disregards all records of migration, and about 160,000 less than the actual figures. (2) *Density of the population and habitations.* The density, whether expressed as the mean distance between individuals, or in more familiar terms, is found to vary from place to place and to increase from age to age. The proportion between the number of persons and the number of habitations is less variable. (3) *Sexes.* The excess of females over males was more than 6 per cent; a slight increase over the preceding decade. It remained at that figure in 1901-1911. (4) *Ages.* At this stage we reach less solid ground. The returns of age are falsified by various causes. Many are ignorant and put down a round number at random. The very old desire to appear still older. Very young women overstate their age with a view to obtaining employment; women not very young understate their age. From this double cause the category of female ages between fifteen and twenty-five is enormously exaggerated. All that can be done is to distribute the answers in periods of five years; and, assuming that these totals are correct, to determine by interpolation the numbers for each year. (5) *Condition as to marriage or civil condition.* The immense army of over five and a half million wives supplies an effective force of nearly four million "of reproductive age," between fifteen and forty-five. The number of single women and widows of this age-period exceeded the number of wives by over 400,000. The proportion of married persons to the adult population is declining. (6) "The most laborious, the most costly, and

after all, perhaps, the least satisfactory part of the census" is that which is concerned with the *occupations* of the people. One difficulty is obscurity of the answers given. What sort of occupation is designated by an "all-rounder," or a "baubler"? The same designation may have different meanings. Thus clothier means in some parts cloth-maker, in others cloth-dealer. There is also the difficulty of multiple occupations. For the census of 1901 the classification of the occupations was, to a great extent, recast to bring the census statistics more in harmony with those issued by the Home Office and the Board of Trade. In earlier censuses the six-fold classification framed by Dr. Farr had been adopted and modified from time to time. To reproduce the figures in detail would be out of place here. The following round numbers strike the imagination and impress the memory. The number of persons engaged in transport is over a million and a quarter; the number employed on textile fabrics about a million and a quarter; the number employed on dress about a million and a quarter; the number of agricultural labourers over a million; of miners nearly half a million. The number of the professional classes is about 600,000, and of those employed in preparing food, drink, tobacco, and concerned with lodgings about a million. (7) Under the head *Birthplaces of the population* we learn what proportion of the inhabitants have filtered into England from other countries: about 1 per cent from Scotland, 1·3 per cent from Ireland, and from abroad about 1 per cent. (8) *Infirmities* comprise blindness, deaf-mutism, and the various forms of mental unsoundness. It is gratifying to find the relative numbers of the blind (about 1 per 1285 of the population) diminishing. That men should become blind oftener than women is not surprising.

A more recent model of a census is presented by the preliminary report of the census of 1911 for England and Wales. The Report begins by stating the total number of persons returned as living in England and Wales at 12 P.M. on 2nd of April 1911: namely 36,075,269. The deficiency of this number, as compared with the estimate formed (see above), is accounted for partly by a diminution in the natural increase, partly by an increase in the net emigration from England and Wales during the decade which far exceeded that of the decade 1891-1901. The decline in the natural increase was not due to increased mortality but a decrease in the birth-rate. The number of families, 8,005,290, has increased in proportion to the population by ·55 per cent; the number of inhabited houses, 7,141,781, has increased in a rather smaller proportion. The rate of increase of population varies in different areas; with some exceptions, being highest in the counties adjacent to London and counties in which coal-mining is the predominant industry. Eight rural counties show an actual decrease. The general law that a district increases more rapidly the more decided its urban character is not overthrown by the figures which show in some cases a smaller percentage increase for districts with populations above 100,000 than for districts with populations between 20,000 and 100,000. For "probably, or at any rate possibly," the contradiction is only apparent, the newcomers in the larger towns having to settle outside the municipal or official boundary. Accordingly the falling off of increase in some large towns need not imply a decline in prosperity. The population of the Administrative County of London has decreased ·29 between 1901 and 1911—the first time that such a phenomenon has presented itself. Twenty out of the twenty-nine Metropolitan Boroughs show a decrease, while the City of London fell about 27 per cent. The "Outer Ring," on the other hand, increased 33·49 per cent.

The following table shows the figures for the United Kingdom at two recent censuses:—

Enumerated population of the United Kingdom.

	1901.	1911.
England and Wales	32,526,075	36,075,269
Scotland	4,471,957	4,759,445
Ireland	4,456,546	4,381,951
United Kingdom.....	41,454,578	45,216,665

The rate of increase of the United Kingdom in the decade 1901-1911 was 8·2 per cent. It was thus lower than in the decade 1891-1901 when it was 9·5 per cent, equal to the rate in the decade 1881-91, but lower than in the earlier decades 1861-71 and 1871-81, when it had been 8·8 per cent and 10·8 per cent respectively. The movement in the rate of growth was unequally shared by all the divisions of the kingdom. In England and Wales the population showed an increase of nearly 9·6 per cent as compared with the enumeration in 1901; in Scotland there was an increase of 14·7 and 11·7 per cent in the large town and small town districts respectively, and a decrease of 5·6 per cent in the insular-rural districts. In Ireland there was a decrease of 1·7 per cent over the whole country, Leinster alone having increased by ·7 per cent, while Connaught decreased by 5·7 per cent. The population of the islands in the British seas enumerated in 1911 was 148,915; showing a decrease of 1·455 per cent as compared with the enumeration of 1901, and a considerable decrease in the rate of growth.

Valuable as these results are, and though the British census may be described as a good article at the price, there is room for many improvements. The reform most loudly called for is that the census should be quinquennial. A committee of the Royal Statistical Society (*Journal*, 1888, p. 817) urged that the additional cost incurred by the reform would be

small in comparison with the advantage of obtaining correct returns of population. They pointed out that the estimated population for certain districts was inaccurate to the extent of 11, and even 18 per cent. This argument has now become *a fortiori*, owing to the imperfections disclosed by recent censuses. Dr. Noel Humphreys, in his "Results of the Recent Census and Estimates of Population in the largest English Towns" (*Journ. Stat. Soc.*, 1891), gives instances of towns in which the hypothetically estimated death-rate differed from the true figure by as much as 20 and even 26 per cent. The estimates based on the decennial census were so worthless that they seemed to evidence a decline in the death-rate of Salford and Liverpool, while in reality there was an increase. For recent work on this point see yearly volumes of the *Journ. Stat. Soc.* under heading "Census," especially vol. lxxiv., 1911, arts. by E. C. Snow—"The Application of the Methods of Multiple Correlation to the Estimation of Post-Censal Populations," and "Estimates of Population." The Statistical Society has also, through the mouth of various committees, advised that the character, as well as the number, of dwellings should be returned. Sir I. Palgrave shows (*Journ. Stat. Soc.*, 1869, p. 411) that information as to the house accommodation of the people is very deficient. This has not yet been completely supplied. Another recommendation sanctioned by the Statistical Society is that the religious profession of each inhabitant should be obtained. Mr. Longstaff, in his "Suggestions for the Census of 1891" (*Journ. Stat. Soc.*, 1889), proposes that the number of rooms in dwelling-houses should be recorded. An annual census has been proposed by the late Sir Edwin CHADWICK (*Journ. Stat. Soc.*, 1889, p. 468; *Internat. Stat. Congress*, The Hague, pt. ii. p. 164). Major Craigie demands more conformity between the census and the returns of the agricultural department. "There must be large omissions in the ranks of land occupiers in our census." (*Journ. Stat. Soc.*, 1887, pp. 98, 149, and Jubilee vol.) For Imperial Census see Sir J. A. Baines' "Under the Crown," and "The Census of the Empire, 1911," *Journ. Stat. Soc.*, vol. lxxiv.

The glory of instituting the first census does not belong to England. While the Population Bill of 1753 was denounced in the House of Commons as subversive of liberty, Sweden was already enjoying a tolerably perfect census. Sweden had the advantage of very complete parish registers, recording not only births, deaths, and marriages, but also the number of persons migrating to or from each parish and residing in it. By the agency of the clergy these materials were embodied in a census in 1749 and subsequent years, first at intervals of three, subsequently of five years. The results of the early Swedish census, communicated to the scientific world by the celebrated Wargentin, were utilised by Dr. PRICE (*q.v.*) and MILNE (*q.v.*) (*Annuities*, ch. xii.-xiii.) MALTHUS (*q.v.*) builds upon these statistics (*Essay*, bk. ii. ch. ii.), noticing the correlation between the lean years and the diminution of marriages. In the recent publications of the Swedish Bureau the study of such correlations is facilitated by affixing to each year a numeral (from I. to X.) indicating the quality of the harvest (see *Journal of the Statistical Society*, xxv. p. 141). Looking at the whole series, "the gradual diminution of mortality since the middle of the 18th century is very striking" now, even more than when Malthus made this observation. The increase of suicides is less gratifying. The unrivalled length of the Swedish records affords particularly striking instances of those uniform relations which constitute what has been called *physique sociale*. The proportion of male to female births was 1·043 to 1 in 1751-60, 1·050 to 1 in 1851-55.

Spain has some claims to priority. A tolerably complete census of the dominions of Castile was taken as early as 1594. There was a general census of Spain in 1787 and in 1797. But then occurred a pause down to the census of 1857. During the first half of the nineteenth century Spain lagged behind the statistical movement which was general in Europe.

The age initiated by the French Revolution was truly called by BURKE the "age of statists." In France a census was ordered in 1791 and executed in 1801. In Prussia a statistical bureau was founded in 1805. The impulse was followed by other states, at different times and with varying pace—some with quinquennial, some with triennial intervals. The inquiries have become more fruitful by the addition of new questions, and the fruit has become more accessible through increasing uniformity of the questions in different countries. The branches of the European census, as they lengthen, become not only broader, but more parallel. The possibility of international comparison is partly due to the action of the International Statistical Congress during the quarter century which followed its first meeting in 1853. The extent to which its recommendations have been adopted may be expressed by the following statement. At the congress of St. Petersburg (1872) consolidating the results of discussions which had been carried on at several preceding congresses, twelve questions or rubrics (as to name, sex, age, etc.) are proposed as "essential," or obligatory. Of these recommendations the first seven are already adopted in twenty-five continental bureaus, with only one or two exceptions. The remaining five directions are carried out, roughly speaking, in about half of the continental states. Among the headings about which it is difficult to obtain uniformity may be instanced *conjugal condition*. At the Florence congress (1867) it was proposed to

ascertain the relationship of husband and wife. The question is put in Sweden and some other countries. *Population, de fait* and *de droit*—The Italian census grapples with the difficult questions connected with domicile by an elaborate arrangement distinguishing the birds of passage from the residents, and the temporary from the permanent absentees. *Age*—Considering the inaccuracy of returns under this head, is it worth while publishing them in full and without manipulation? Some European bureaus have decided in the affirmative. *Language spoken*—What does this heading mean? the language most used in good society, or in the family, or in the church? *Occupations* form a rubric which is the despair of the international statisticians. The diversity of employment in different countries is aggravated by the difficulties of language. What would a Frenchman understand by "clerk of the parish," even when translated (?) into "clerc de paroisse" (*sic*)? "Carvers," one of the designations in the St. Petersburg scheme, should not have been rendered in French as "agens des abattoirs." On these and other topics perfect unanimity is still only an ideal. Even when agreement has been obtained as to the questions to be asked, there still remains diversity in the arrangement of the answers. To smooth these remaining differences may, it is hoped, be a function of the International Statistical Institute, founded in 1885. As M. Korösi, one of the ablest advocates of uniformity, points out, the diverse practices mostly involve no question of principle; it would give no additional trouble to act in concert. It is needless to dwell on the advantages of increased uniformity. The census was used by ancient Rome as an engine of government; modern Europe should make it also an instrument of science.

[For the antiquities of the subject Gabaglio, *Storia . . . della Statistica* (2d ed., 1888), may be consulted. For the history and scope of the census in the United Kingdom, see the preface or report which is attached to every census except the first. Proposals for reform are expressed in the recommendations made by a committee of the Statistical Society before each census (see *Journal of the Statistical Society* for 1840, 1850, and subsequent decades). Sir I. Palgrave's paper, *Journal of the Statistical Society*, 1869; and Dr. Longstaff's paper in *Ibid.* 1889 contain other proposals besides those which have been noticed. A general view of the earlier methods of taking the census on the continent is presented in the *Journal of the Statistical Society*, vol. iii. Mr. Hendriks' detailed accounts of the Spanish and the Swedish census, in the 23d and 25th volumes of the same journal, are very valuable. As to the history and scope of the census in the different European states, copious information will be found in the records of the International Statistical Congress, especially in the reports made by the members for each nation. In the same publication will be found repeated proposals for securing greater uniformity. A conspectus of these recommendations is presented by M. Korösi in his *Projet d'un Recensement du Monde* (Paris, 1881). Attention is due to his own recommendations offered in that work and in his address to the Jubilee meeting of the Royal Statistical Society (Jubilee volume, 1885), and in his contribution to the second *Bulletin of the International Statistical Institute*, p. 200. A comparison of the statistics obtained by the census in different countries is afforded by *Confronti Internazionali* (published by the Direzione Generale della Statistica), Roma, 1884. Many of the figures there compiled have been extracted by Sir Rawson Rawson, who has added explanatory comments (Presidential address to the Statistical Society, *Journal*, 1885). The most recent results for several European countries and for the Cape Colony and Victoria are presented together in the *Notes on the Preliminary Returns of the Censuses*, 1890-91, in the *Journal of the Statistical Society* for Sept. 1891. Less recent comparisons are *Movimento della Popolazione in Italia e in altri Stati d'Europa*, by M. Bodio; *Archivio di Statistica*, 1876; *Mouvements de la Population dans les divers états de l'Europe*, by M. Bertillon; *Annales de la Démographie Internationale*, vol. i.; and other articles in that series (extending from 1877 to 1883). See also Quetelet, *Physique Sociale*, 1869.]

F. Y. E.

CENSUS, United States. The mode of conducting the census of the United States is so important as to demand special notice.

History of the Census.—The origin of the census system in the United States lay in the necessity of establishing some basis for the distribution of representatives and direct taxation among the different states. When the colonies associated themselves together to resist the mother country it was necessary to find some method of distributing the expenses of the war. The congress which assembled in 1775 had no power to assess and collect taxes through officers of its own. The draft of the articles of confederation (1776) provided that expenses should be distributed according to the population of the states, which should be ascertained triennially and transmitted to the assembly of the United States. The southern members objected to the slaves being counted with the whites, and in the articles of confederation finally adopted (1777-1781) it was provided that all expenses for war or the common welfare should be apportioned among the states "according to the value of all land within the state granted to or surveyed for any person, as such land, and the buildings and improvements thereon, shall be estimated according to such mode as the United States in congress assembled, shall from time to time direct and appoint" (art. 8). The land force, on the other hand, was to be furnished by the different states according to the number of white inhabitants in each (art. 9). Neither of these provisions ever led to a census; in fact in 1783 congress recommended

the levying of money in proportion to the population rather than according to land-value, and drew up a table of the estimated population in each state. In this estimate only three-fifths of the slaves were counted. This amendment did not prevail, but we see here the origin of the three-fifths rule which crept into the constitution of 1787 (art. 1, § 2), which is the legal basis of the census at the present time. That clause reads as follows:

"Representatives and direct taxes shall be apportioned among the several states which may be included within this union, according to their respective numbers, which shall be determined by adding to the whole number of free persons including those bound to service for a term of years, and excluding Indians not taxed, three-fifths of all other persons. The actual enumeration shall be made within three years after the first meeting of the Congress of the United States, and within every subsequent term of ten years, in such manner as they shall by law direct."

To carry out this provision of the constitution, congress passed the first census law, 1st March 1790. The law has since been so extended that from a mere enumeration, the census has become an elaborate description of the social and industrial condition of the people of the United States. This progress has in one sense been gradual, but the census of 1850 and that of 1880 stand out as marking epochs, setting the standard for those that followed.

The census of 1790 was a simple enumeration of the people under the following classification: free white males of 16 years and upwards, free white males under 16 years, free white females, all other free persons, and slaves. The census of 1800 was similar in scope except that the age classification was slightly more elaborate, namely: under 10 years, from 10 to 16, from 16 to 26, from 26 to 45, over 45, with distinction of sex. The same population schedule was used in 1810; in addition questions were asked in regard to manufactures, but the latter returns were so incomplete as to be of no value. They were equally incomplete in 1820, and in 1830 the inquiry was omitted. In 1820 the age classification was further elaborated; "foreigners not naturalised" distinguished; and the people divided, according to occupation, under agriculture, commerce, and manufactures. The census of 1830 adopted the age classification: under 5 years, from 5 to 10, from 10 to 15, from 15 to 20, from 20 to 30, and then by decennial periods. It also distinguished the blind, and deaf and dumb, by colour and certain ages. In 1840 the number of insane and idiotic, white illiterates, and statistics of schools were added. A manufacturers' schedule was again attempted, but without much success. The census of 1850 was more elaborate. It included the number of dwelling-houses, of families, of persons according to sex, age, colour, free or slave, profession or occupation, value of real estate, number of persons married within the year, attendance at school, illiteracy, the deaf and dumb, blind, insane, idiotic, pauper, and convicts, mortality statistics for the year, products of agriculture and industry, wages, capital, taxes, colleges and schools, newspapers and periodicals, and churches. Most of our comparisons at the present time go back to this census. In 1879 a new act was passed which resulted in the elaborate "tenth census of the United States," a description of which is given below.

Method of taking the Census.—The returns of 1790 were taken under the supervision of United States marshals and sent to the president of the United States. From 1800 to 1840 they were sent to the secretary of state and published by him. In 1850 the census office was created in the newly-established department of the interior; since then a superintendent of the census has been appointed for each census. The law of 1st March 1889, for the taking of the eleventh census (1890), provided for the appointment of (not more than) 175 supervisors who were to appoint enumerators, the latter to visit personally every family in their subdivisions and by inquiry obtain all particulars required by the law, which also allowed schedules to be distributed in advance, to be filled up by householders and others. The schedules to be employed were (as in 1880) a population schedule, one for farms, for manufactures, for mortality and vital statistics, for social statistics, and for transportation companies. Where there was an official registration of deaths, the superintendent might withhold the mortality schedule from the ordinary enumerators and obtain the statistics through official records. The superintendent might withhold also the schedules for manufacturing, mining, and social statistics, and charge the collection of these statistics upon experts and special agents. He might also employ special agents to investigate the statistics of the manufacturing, railroad, fishing, mining, cattle, and other industries of the country, and of telegraph, express, transportation, and insurance companies as he might require. The census also took on a special schedule the names, organisations, and length of service of those who had served in the army, navy, or marine corps of the United States in the war of the rebellion, and who were survivors at the time of the inquiry, and widows of soldiers, sailors, or marines. The population schedule included an inquiry as to the number of negroes, mulattoes, quadroons, and octoroons. The superintendent also collected the statistics relating to the recorded indebtedness of corporations and individuals; also, information relating to animals not on farms. The cost of the census of 1890 was not to exceed

$6,400,000 (say £1,280,000), exclusive of printing, engraving, and binding. The cost of the census of 1880 was about $4,853,350 (say £970,000). One of the criticisms made on census methods in the United States had much weight, namely, that, the census office should be permanent. Formerly, as soon as the census was completed, the office was abolished, and the skilled force was disbanded. The result was that every census was taken by inexperienced men, and all the benefit of previous practice in statistical work was lost. By the act of 1902, a permanent Bureau of the Census was created. One of the chief objects of this act was the retention of a certain number of persons familiar with decennial census work, but also to provide an organisation to deal in the interval between the censuses with certain statistics now crowded upon the decennial enumerations, such as investigations as to industries, public indebtedness, social statistics, etc.

The Scope of the Census.—This may be seen by a survey of the tenth census, an extraordinary undertaking, unlike anything that preceded it in the United States. In the words of the superintendent,[1]—"It was intended to form a grand monumental exhibit of the resources, the industries, and the social state of the American people on the occasion of their tenth ten-year enumeration. In its nature much of the work done from 1880 to 1883 is definitive or else such as to require only slight additions or corrections from time to time."

The tenth census falls into two parts: the ordinary statistics of population, wealth, and industry; and the special investigations and reports of experts having only a semi-statistical character. It will be necessary to dismiss these latter with only a word.[2] They are not properly census work, and their value can be estimated only by scientific men. The "Forest trees of North America," for instance, is an elaborate description of the trees of the United States, their distribution, their value as lumber, the strength of different kinds of wood, etc. The volumes on "Cotton-growing" contain a similar elaborate description of the cotton-growing states of the south, soil and climate, strength of cotton fibres, methods of cultivation, etc. Other volumes do the same for tobacco, the cereals, petroleum, coke, building stones, precious metals, other metals, and the natural water power of the United States. Still others contain elaborate descriptions of machinery used in various industries, and the processes of production. Such, for instance, are the reports on flouring mills, on the ice industry, on pumps and steam engines. Still further removed from a statistical investigation is the volume containing the mining laws of the United States and of the several states and territories. Two volumes contain "Statistics of Cities," giving a history of each city and town in the United States and a description of its government, institutions, sewerage system, pavements, etc. All this is scientific work, not census work. "It is not to be expected that succeeding censuses will be of such colossal magnitude."

Real census work falls under the following heads: (1) population; (2) mortality and vital statistics; (3) agriculture and fisheries; (4) manufactures, mining and mechanical industries; (5) transportation; (6) taxation and public indebtedness.

The thirteenth census (1910) covers the subjects (1), (3) and (4). The twelfth census had included (2), but mortality statistics are now collected annually by the Permanent Census Bureau.

Population.—There are some peculiarities of United States census work which explain the size of the publications, and are of scientific interest as differentiating it from census work in Europe.

(1) One is the size of population and the extent of country covered by the census. In 1880 the enumeration covered fifty million people, the census of 1910 covers over ninety-three millions. The country is divided into forty-eight states. All the facts of the census are presented for each state, for the purpose of satisfying local interest. Still further, the states are divided into counties, sometimes more than a hundred in a state, and most of the tables carry the figures out for the counties. The counties are divided into townships, wards, etc. The towns and cities often differ from these in their boundaries, and sometimes separate presentations are made for these minor civil divisions.

(2) An elaborate attempt was made to connect population with the facts of physical and political geography, such as climate, altitude, rainfall, eastern, western, and southern sections, etc. The immense territory of the United States offers such a variety of physical characteristics, and the history and colonisation of the several sections have been so different, that a wide field (it was hoped) would be opened for the use of statistics in sociological speculation.

(3) Two elements in the population of the United States are of very great interest. One is the coloured population, the other the foreign-born. In no other population do we find the opportunity to study such social questions as those presented by the presence of a race different in blood from the dominant race and just lately emancipated from servitude, and by the presence of a numerous body of foreigners. Ethnic questions have nowhere such a field for statistical determination. With this feeling the census has, in almost all its investigations, analysed the results with distinction of race and place of birth. Such are the characteristics of the census which make it of particular scientific importance

[1] *Quarterly Journal of Economics*, ii. 143, 145.

[2] See titles of volumes of the Tenth Census at end of this article.

We will now examine some of the results :—

The total area of the United States is over 3,000,000 square miles, but of this only 1,569,570 square miles had (1880) a density of population of 2 to the square mile. This is called the settled area, and has steadily increased since the beginning of the occupation. The growth of population and of settlement at the successive census periods is seen in the following table :—

Year.	Population.	Settled Area.	Density per sq. mile of settled area.	Increase per cent of Population in Decade.
1790	3,924,214	239,935	16·4	....
1800	5,308,483	305,708	17·4	35·10
1810	7,239,881	407,945	17·7	36·38
1820	9,633,822	508,717	18·9	33·06
1830	13,866,020	632,717	20·3	32·51
1840	17,069,453	807,292	21·1	33·52
1850	23,191,876	979,249	23·7	35·83
1860	31,443,321	1,194,754	26·3	35·11
1870	38,558,371	1,272,239	30·3	22·65
1880	50,155,783	1,569,570	32·0	30·08

This table shows the rapid growth of population and its slight increase in density on account of the constant extension of the area of settlement. For further illustration the census has adopted the following classification of density of population. Group 1, from 2 to 6 to a square mile, represents a very sparse population, supported perhaps by grazing (frontier); group 2, from 6 to 18 to a square mile, represents agriculture in early stages or on a rugged soil; group 3, from 18 to 45 to a square mile, represents, in the United States, well-developed agriculture; group 4, from 45 to 90 to a square mile, indicates the presence of manufacturing industry; group 5, over 90 to the square mile, represents advanced industry. A series of tables and coloured CARTOGRAMS presents the distribution of population according to these groups at each decade since 1790. It is a most interesting and unique study of the process of settlement in a new country, at first the tide of settlement being controlled by the course of navigable rivers and the removal of hostile Indians, and later by lines of railroads. The following table will show the area of settlement for the different groups in 1880 :—

				Sq. miles.
Group 1,	from 2 to 6	to a sq. m.	.	384,820
,, 2	,, 6 ,, 18	,, ,,	.	373,890
,, 3	,, 18 ,, 45	,, ,,	.	554,300
,, 4	,, 45 ,, 90	,, ,,	.	231,410
,, 5	,, over 90	,, ,,	.	25,150

Outside of cities only a very small strip of territory along the Atlantic seaboard has acquired the density of population due to advanced industry.

In a similar way the distribution of population is shown according to latitude and longitude (the greater part of the population live between latitude 38° and 43°, one half to the north of 39° of latitude, and to the east of 83° of longitude; according to elevation above sea-level (nearly two-fifths live below 500 feet, and three-fourths below 1000 feet); according to drainage basins (the greater part of the population is in the Mississippi valley); according to mean annual temperature, to mean temperature in July, to mean temperature in January, to maximum temperature, to minimum temperature, to annual rainfall, and to spring and summer rainfall. The centre of population is said to be at 39° 4′ 1″ latitude, and 84° 39′ 7″ longitude, or at a point about 8 miles west by south of Cincinnati. All these calculations except the last are carried out for the foreign-born and the coloured as well as for the total population.

Turning now to the distinctions of colour and race, the population of the United States in 1880 was as follows :

Total	population	.	50,155,783
White	,,	.	43,402,970
Coloured	,,	.	6,580,793
Native	,,	.	43,475,840
Native white	,,	.	36,843,291
Foreign-born	,,	.	6,679,944

The coloured population is mostly in the southern states; in three (South Carolina, Mississippi, and Louisiana) the coloured were (1880) in excess of the whites. The foreign-born are principally in the north, and especially in the large cities. The coloured are almost all of them of native birth, and the foreign-born are almost all of them whites, so that the two elements are entirely separate in the statistics. It is to be borne in mind that the terms "native" and "foreign" refer always to place of birth, not to descent or alien condition. Children of immigrants born on the soil of the United States are classed as natives. This is unavoidable, but has led to many false conclusions in regard to the influence of the foreign element in the United States. We cannot say, for instance, how many of the people of the United States are descendants of the original settlers, and how many of immigrants since 1820. The census did inquire as to the birthplace of the parents, and by means of this inquiry discovered that nearly 15,000,000 inhabitants of the United States were either born abroad or children of parents born abroad. It is one of the most interesting points of the tenth census to follow out these foreign-born. They congregate largely in cities, 34·2 per cent of the total number being found in the largest 44 cities (of Irish 45·26 per cent, of Germans 38·73 per cent, and of Italians 60·80 per cent were in large cities). The census follows the foreign-born into different occupations. Of all the persons engaged in agriculture in the United States, 10·60 per cent were of foreign birth; of those engaged in professional and personal services, 24·48 per cent; of those in trade and transportation, 25·33 per cent; and

of those engaged in manufactures, mining, and mechanical industries, 31·95 per cent were of foreign birth. Other statistics show the proportion of foreign-born among illiterates, prisoners, convicts, paupers, deaf and dumb, insane, blind, etc. The figures must be used with caution, because the census was not altogether successful in the enumeration, and because no regard was paid to the age classification, although the abnormal proportion in some of these cases (insane, blind, etc.) is due to the abnormal proportion of adults among the foreign-born. This whole inquiry as to the foreign-born is a characteristic part of the American census.

The other population tables do not differ from those in use in Europe. The classification by sex shows a proportion of only 965 females to 1000 males, contrary to the usual case in Europe, but easily explained by immigration. In the eastern states there was an excess of females, owing to emigration of males westward, in the south also an excess of females, due apparently to the usual cause, namely, greater mortality among males. The age classification showed a large number of children, especially among natives, but this latter figure must be used with great care because children of immigrants born on this soil were classed as natives. The urban and rural classification showed 22·5 per cent of the population living in towns of 8000 inhabitants and over (in 1790 it was only 3·3 per cent), and 25·5 per cent living in towns of 4000 and over. Of the people of the United States engaged in gainful occupations, 44·1 per cent were engaged in agriculture, 23·4 per cent in personal and professional services, 10·4 per cent in trade and transportation, and 22·0 per cent in manufactures, mining and mechanical industries.

II. *Mortality and Vital Statistics.*—As there has been no uniform registration of births and deaths for the whole country, and in many states having registration it was imperfect, American mortality and vital statistics of former years are sadly deficient. The tenth census tried to collect the number of deaths during the census year and the ages of the deceased. By comparison with one or two states where there was registration, it was estimated that the census returns were thirty per cent short of the actual number of deaths. The office, in addition, by correspondence with nearly thirty thousand physicians, tried to make up this deficiency, and to ascertain with accuracy the cause of death. This inquiry was only partially successful. In large cities where there was already a registration of deaths, the census office simply copied the list. The births were obtained by adding to the number of children under one year of age the number of children reported as born and dying during the census year. The number was supposed to be 15 per cent short of the actual births. With such imperfect material, the birth- and death-rates, the proportion of deaths from different diseases according to age, sex, locality, race and nationality, the mortality tables, etc., must have a very uncertain value. The birth-rate was probably about 36 per 1000, the death-rate about 18 per 1000. The only excuse for the census undertaking this impossible task was that no one else would.

III. *Agriculture.*—These returns were made on a separate farm schedule filled by each farmer under the direction of the enumerator. The figures as to acreage rest on no official survey, but simply on the statements of the farmer. The statistics serve a double purpose: to display the condition of farming as a national industry, and to show the value of agricultural products as a contribution to national wealth. Under the first head, the number of farms was 4,008,997, comprising 536,081,835 acres, or 28·9 per cent of the total land area. But nearly one half (46·9 per cent) of the land in farms was unimproved, mostly woodland and forest. The average size of farms was 134 acres, but this varied greatly with localities. About 74 per cent of the farms were cultivated by owners, about 8 per cent by tenants paying a money rent, 18 per cent were cultivated by tenants paying a share of the product as rent. The value of farms including buildings was estimated as $10,197,096,776 (say £2,040,000,000). Under the second head the census gives detailed information as to number and value of live stock on farms, acreage devoted to different crops, amount and value of different products, such as wheat, corn, cotton, etc. for 1879, details which it would be useless to repeat here.

IV. *Manufactures.*—These statistics were collected with great care and comprise all factories and workshops producing to the value of $500 (say £100) per annum and over down to the village blacksmith or carpenter. The statistics of industry are regarded with great interest in the United States as indicative of the growth and material prosperity of the community. Especially is this true in the rivalry of state with state, and of city with city, and many bitter attacks were made on the census office because the results did not come up to local expectation. None of these was substantiated. The statistics have been collected since 1850 on the same plan, and give some interesting points of comparison, as shown in the following table (values for 1870 reduced to gold basis):

Year.	Value of gross product.	Value of raw materials.	Total amount of wages paid.	Capital.	Number of hands employed
	£	£	£	£	
1850	203,823,923	111,024,764	47,351,893	106,649,050	958,079
1860	377,172,335	206,321,018	75,775,793	219,971,143	1,311,246
1870	677,172,070	398,148,359	124,093,495	338,913,403	2,053,996
1880	1,073,915,838	679,364,710	189,590,759	558,055,521	2,732,535

(In £ sterling, $ converted as 5=£1.)

These figures seem to give a fair picture of the manufacturing industry of the United States.

The return of total value has been criticised on the ground that the finished product of one industry is the raw material of another, and that thus the same material is valued several times in succession. But there seems to be no objection to this so long as value is added to the product at each stage. In another respect the census figures have been greatly abused. Persons have taken the cost of raw materials plus the total wages paid, and deducting it from the value of the finished product, treated the result as employer's profit. For the whole of the United States (1880) this figure would be $1,024,801,847 (say £200,000,000), or more than the total wages paid. On the basis of the capital returned, this represented a profit of 36·5 per cent in manufacturing industries. In some cases it was still greater, as for instance in the boot and shoe industry there appeared to be a profit of nearly 50 per cent. The fallacy arose from considering wages and raw materials as representing total cost of production, and from the difficulty of determining the real amount of capital invested. The eleventh census attempted to remedy the false impression, in part, by adding to the cost of production the amounts paid for rent, for taxes, for insurance, for commissions, for interest, for freight and transportation, and other expenses. It also proposed to follow the example of the Massachusetts census of 1885, and include under the head of capital, credit capital, *i.e.* money borrowed, bills receivable in excess of bills payable, etc. This would doubtless prevent any such excessive sum appearing as profits again; but the whole attempt to show the rate of profit by means of a census enumeration is fallacious, and destined to failure.

Wages.—The total sum paid for wages during the census year divided by the whole number of employees gave an average wage, $346·90 (say £70) per annum. This figure has no value because many of the persons were employed during only a part of the year, and because it averages the wages of men, women, and children. The average wage of employees in the principal industries is fallacious for the same reasons. In 1890 it was proposed to attempt a classified wage, *i.e.* ascertain the number of men receiving $5 (£1) per week, between $5 and $6 (£1 and £1 : 4s.), etc.

V. *Transportation.*—The statistics for railroads were collected on special schedules filled out by the companies themselves (1017 companies working 87,781·97 miles of road), and covering financial statistics, such as income and expenditure, amount of stock, bonds, and general indebtedness, traffic statistics, rolling stock, employees, accidents, etc. There are similar reports for telegraphs, telephones, steam navigation, canals, etc.

VI. *Taxation and Public Indebtedness.*—This report (vol vii.) deserves notice as our only source of information in respect to the amount of wealth, the burden of taxation, and the sum of public indebtedness for the whole of the United States. Each state had its own system of valuation and taxation, and its own statistics of local indebtedness, but these were not uniform and had never before been combined. The census office was able to accomplish this by extensive correspondence with state and local officers, and prominent bankers, and business men throughout the country. The results in regard to taxation were not entirely satisfactory. As regards wealth, the census office estimated the total wealth of the United States to be $43,642,000,000 (say £8,700,000,000). The statistics of indebtedness reveal for the first time the amount of state and local indebtedness, the cause for which it was contracted, rate of interest paid, amount of sinking funds for its extinction, etc. The report analyses also the public debt of the United States, number of holders, amount of their holdings, amount in the hands of banks and corporations, the section of country where held, etc. This may not be true census work, but the student of finance is to be congratulated that the census office was willing to do it.

State Censuses.—Some of the states take a census at the intermediary period between the national. Most of these are mere enumerations of the people for the purpose of readjusting the distribution of representatives. The census law of 1879 tried to encourage the states to prosecute such work by providing that if any state or territory should take such a census at the intermediary period and in accordance with the schedules of the United States census, the United States government would pay one half of the expense of supervisors and enumerators. The provision had no effect, and was quietly dropped out of the act of 1889. The census of Massachusetts of 1885 was probably the most perfect piece of statistical work done in the United States up to that date.

Census of 1910.—The thirteenth census was taken as of date 15th April 1910. The total area enumerated included the United States, Alaska, Hawaii and Porto Rico, and persons stationed abroad in the service of the government. The figures given below are for the United States only:

Date.	Total Population.	Increase over previous Census.	Increase per cent.	Land Area in sq. miles.	Population per sq. mile.
1890	62,947,714	12,791,931	25·5	2,973,965	21·2
1900	75,994,575	13,046,861	20·7	2,974,159	25·6
1910	91,972,266	15,977,691	21·0	2,973,890	30·9

The statistics of population and agriculture (except those relating to irrigation collected by special agents) were collected by a force of supervisors and enumerators. There were 330 supervisors of the census appointed by the

President, controlling about 70,000 enumerators of population and agricultural statistics, the candidates being subjected to a practical examination. In general each supervisor had jurisdiction over one congressional district, but in the more populous districts the work was subdivided. The statistics of manufactures, and of mines and quarries, were collected by special agents or by clerks detailed from the Census Bureau. Statistics of population are classified with regard to:—number; distribution in territorial divisions, in states, in counties, in urban and rural districts, in cities over 2500, and cities over 25,000 inhabitants; colour, or race, nativity, parentage; sex; age; marital condition; place of birth, native or foreign (with date of immigration); school attendance and illiteracy; dwellings and families. Some recent results are as follows:—

Population.

	Under 2 to a sq. mile	321,255 sq. miles.	
From	2 to 6 „ „	434,242	„
„	6 „ 18 „ „	962,871	„
„	18 „ 45 „ „	636,207	„
„	45 „ 90 „ „	396,670	„
	Over 90 „ „	210,769	„

Proportion of Urban and Rural Population to Total. Total = 100.

	1880.	1890.	1900.	1910.
Urban	29·5	36·1	40·5	46·3
Rural	70·5	63·9	59·5	53·7

White and Negro Population.

	Total.	White.	Negro.	Indian, Chinese, Japanese, etc.	Per cent of Total.		
					White.	Negro.	Others.
1890	62,947,714	55,101,258	7,488,676	357,780	87·5	11·9	·6
1900	75,994,575	66 809,196	8,833,994	351,385	87·9	11·6	·5
1910	91,972,266	81,731,957	9,827,763	412,546	88·9	10·7	·4

Native and Foreign-born Population.

	Total.	Native.	Foreign-born.	Per cent of Total.	
				Native.	Foreign-born.
1890	62,947,714	53,698,154	9,249,560	85·3	14·7
1900	75,994,575	65,653,299	10,341,276	86·4	13·6
1910	91,972,266	78,456,380	13,515,886	85·3	14·7

Population by Sex.

	Population.			Males to 100 Females.		
	Male.	Female.	Total.	Native White.	Foreign-born White.	Negro.
1890	32,237,101	30,710,613	105·0	102·9	118·7	99·5
1900	38,816,448	37,178,127	104·4	102·8	117·4	98·6
1910	47,332,277	44,639,989	106·0	102·7	129·2	98·9

Agricultural statistics relate to (1) farms; (2) tenure, mortgage indebtedness, race of farmers, size of farms; (3) livestock; (4) crops, acreage, production and value; (5) irrigation. In 1910 there were 6,361,502 farms in the States, total acreage 878,798,000 acres, of which 478,452,000 acres were improved. Total value of farm property, £8,198,289,818.

The census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry and their growth or decline, and incidentally to present data showing character of organisation, location and size of establishments, labour force and similar subjects. These statistics are classified according to industries, states and cities. The statistics of mines and quarries are also classified according to industries and states.

The number of manufacturing establishments was 268,491; persons engaged in manufactures, 7,678,578; primary horse-power, 18,675,376; capital, £3,685,654,000; expenses, £3,690,818,000 (wages and salaries, £873,122,600; materials, £2,428,558,000); value of products, £4,134,410,000; value added by manufacture, £1,705,852,000. The number of mines, quarries and wells was 193,688; persons engaged in mining, 1,166,948; primary horse-power, 4,699,910; capital, £732,505,413; expenses, £214,838,285 (salaries and wages, £131,116,893; materials, £52,022,000); value of products, £247,682,000.

[*The First Census, 1790.* (Return of the whole number of persons within the several districts of the United States, 1791.)—*The Second Census, 1800.* (Return of the whole number of persons, etc., 1801.)—*The Third Census, 1810*, 2 vols. (Aggregate amount of each description of persons within the United States of America and the Territories, tables showing the several branches of American manufactures.)—*The Fourth Census, 1820*, 2 vols. (Census for 1820; digest of accounts of manufacturing establishments, 1823.)—*The Fifth Census, 1830*, 1832.—*The Sixth Census, 1840*, 4 vols. ((1) Enumeration of the inhabitants of the United States as corrected at the Department of State in 1840, 1841; (2) statistics of the United States as returned by the marshals of the several judicial districts, 1841; (3) compendium of the enumeration of the inhabitants and statistics of the United States, 1841; (4) census of pensioners of revolutionary and military service.)—*The Seventh Census, 1850*, 4 vols. ((1) Seventh Census of the United States, 1853; (2) mortality statistics, 1855; (3) statistical view of the United States compendium of the Seventh Census, 1854; (4) Report of the superintendent of the census for Dec. 1, 1852, 1853.)—*The Eighth Census, 1860*, 5 vols. ((1) Preliminary Report, 1862; (2) population, 1864; (3) manufactures, 1865; (4) agriculture, 1864; (5) statistics (including mortality, property, etc.), being the final exhibit of the Eighth Census, 1866.)—*The Ninth Census, 1870*, 4 vols. ((1) Population and social statistics, 1872; (2) vital statistics, 1872; (3) statistics of wealth and industry, 1872; (4) compendium of the Ninth Census, 1872.)—*The Tenth Census of the United States, 1880.* (*a*) Compendium of the Tenth Census, 1883. (*b*) Tenth Census of the United States, 22 vols.: I. Population; Newspapers and Periodicals; Public Schools; Illiteracy; Defective, Dependent, and Delinquent Classes. II. Manufactures, embracing general Statistics and Monographs on Power used in Manufactures;

Factory System; Interchangeable Mechanism; Hardware, Cutlery, etc.; Iron and Steel; Silk Manufacture; Woollen Manufacture; Chemical Products and Salt; Glass Manufacture, 1883. III. Agriculture, general Statistics and Monographs on Cereal Production; Flour Milling; Tobacco Culture; Manufacture and Movement of Tobacco; Meat Production, 1883. IV. Transportation, including Railroads; Steam Navigation; Canals; Telegraphs, Telephones; Postal Telegraphs, 1883. V. and VI. Cotton Production (general discussion and special reports for fifteen states), 1884. VII. Valuation, Taxation, and Public Indebtedness, 1884. VIII. Special Reports on: the Newspaper and Periodical Press; Alaska, its Population, Industries, and Resources; the Seal Islands of Alaska; Shipbuilding Industry, 1884. IX. Forests of North America. X. Special Reports on Petroleum, Coke, and Building Stones, 1884. XI. and XII. Mortality and Vital Statistics, 1885, 1886. XIII. Statistics and Technology of Precious Metals, 1885. XIV. United States Mining Laws and Regulations thereunder, and State and Territorial Mining Laws. XV. Mining Industries (exclusive of Precious Metals), 1886. XVI. and XVII. Water Power, 1885, 1887. XVIII. and XIX. Social Statistics of Cities, 1886, 1887. XX. Statistics of Wages in Manufacturing Industries; Prices of Necessaries of Life; Trades Societies; Strikes and Lock-outs, 1886. XXI. Defective, Dependent, and Delinquent Classes, 1888. XXII. Power and Machinery employed in Manufactures (six Monographs); Ice Industry, 1888. *The Eleventh Census: Report of the Superintendent of the Census*, 6th Nov. 1889.—*Report of a Commission on different Methods of tabulating Census Data*, Washington, 1889. *Bulletins of the Eleventh Census.* For History and methods: *Report of the Committee of the House of Representatives on the Ninth Census*, Jan. 18, 1870. E. C. Lunt, *Key to the Publications of the United States Census* (Publications of American Statistical Association, 1888). Francis A. Walker, "The Eleventh Census of the United States" (*Quart. Journ. of Econ.*, vol. ii., 1888). Carroll D. Wright, "The Census, its Methods and Aims" (*International Review*, vol. ix.). R. Mayo-Smith, "Wage Statistics and the next Census" (*Quart. Journ. of Econ.*, vol. ii., 1888). Many of the statistics of the Tenth Census will be found in the *Encyclopædia Brit.*, 9th ed., art. "United States: Political Geography and Statistics" (F. A. Walker). *The Thirteenth Census*; publications of the Bureau of the Census, Washington; esp. *Abstract of the Census*, 1 vol., 1913.] R. M.-S.

CENT, CENTESIMO or CENTAVO (words used as equivalent to each other—*Cent* in the United States of America, *Centesimo* in Peru and the Argentine Republic, *Centavo* in Chili, the United States of Columbia, the Philippines and Mexico). The 100th part of any DOLLAR, *e.g.* the dollar of the United States of America or equivalent coin (*e.g. Peso, Sol, Duro*, of Chili, Peru, etc.). Copper, nickel, or bronze token coins of various weights and dimensions.

CENT (Dutch). Bronze token coin weighing 59·34 grains; $2\frac{1}{2}$ and $\frac{1}{2}$ cents in proportion. 100 cents = 1 florin. F. E. A.

CENTESIMI (Italy); CENTIMES (France, Belgium, and Switzerland); CENTIMOS (Spain). Bronze token coins weighing 1 gramme (15·43235 grains) each. 100 = 1 franc (or its equivalent). F. E. A.

CENTRALISATION. A term applied to the concentration of the functions of government, more usually those of an administrative character, in the hands of a single directing authority.

It is obvious that the supreme authority existing in any community is able to exercise a paramount influence upon its wealth and economic position. On this account many of the leading writers on economics have discussed, in some detail, "the proper limits of the functions and agency of governments," and incidentally the organisation by which those functions and that agency should be exercised. The results arising from the regulation and control of individual action by public authority have been seen to be frequently determined by the manner in which the authority is brought into existence, and the nature of the responsibility attaching to its actions; and some at least of the economic objections which present themselves to the multiplication of the duties of government, disappear when these are placed in the hands of local and sectional, as distinguished from imperial and national, authorities. Thus MILL points out that the evil of entrusting too much business to the government is "felt in great magnitude under some of the governments of the Continent, where six or eight men living at the capital and known by the name of ministers, demand that the whole public business of the country shall pass, or be supposed to pass, under their individual eye." But he adds that "the inconvenience would be reduced to a very manageable compass in a country in which there was a proper distribution of functions between the central and local offices of government" (*Political Economy*, 6th ed., 1865, p. 567). Sir Arthur Helps, too, calls attention to the now well-recognised fact that a carefully devised system of LOCAL GOVERNMENT affords an opportunity of practising that "habit of spontaneous action for a collective interest" without which the education of a people, as Mill observes, "is defective in one of its most important branches."

The extent to which it is better that the functions of government should be entrusted to a minor authority and dissociated from the national executive is not capable of any exact definition. It will differ in different nations, and at different periods of their existence. It must depend upon the willingness of those upon whom authority is to devolve to exercise it for the common good, and to sink individual interests in the desire to advantage the general welfare; much too, will depend on the education and intelligence of the constituency within which administrative powers are to be exercised,

and of the class or classes which are to wield them. The decision as to whether any given function may more properly be entrusted to an authority under the direct control of the national government, or to an authority independent thereof, rests rather with the statesman than with the economist. If, however, it be true that "people can understand their own business and their own interests better, and care for them more than the government does, or can be expected to do," then it would appear that the *onus probandi* should always rest upon the advocates of the exercise of governmental power in any direction. It must be shown to be for the general advantage that individual action should be replaced by the action of a small section of the community, and similarly that the nation as a whole will perform any given function better than the section immediately concerned. In other words the endeavour should be to restrict the exercise of public authority to the smallest possible area, and above all to secure that all who either directly or indirectly are responsible for the administration of public business should have an actual interest in the success of their administration.

In thus limiting the executive area, and restricting the exercise of public authority, as far as other circumstances will admit, to those directly concerned, care must be taken to preserve for the general use the wider experience and clearer insight into principles which a central authority will usually possess, and it will frequently be necessary to reserve some power of review to be exercised in the interests of minorities or of other sections of the community.

The English poor-law system affords a good illustration of a system of independent local administration combined with centralised supervision and control within certain prescribed limits. The maintenance of the poor being a matter of national concern, and it being impossible to localise the effects of good or bad administration in such a matter, parliament has prescribed the principles upon which relief shall be afforded and its cost raised. A department under a responsible minister has also been established to see that these principles are observed, and to furnish the best advice and information available. But it rests with the local authority to adjudicate on applications for relief, and generally to make provision for the due administration of the law.

Much of the legislation by means of "private bills" would be more efficient if it were entrusted to a less important, but more interested, authority than the imperial parliament, and the establishment of COUNTY COUNCILS may eventually afford a means of relegating many of the functions at present performed by the national executive to a minor authority better able to discharge them to the advantage of the section of the community more immediately concerned.

In view perhaps of the fact that the British government is the least centralised in Europe, our own literature on the subject is much less ample than that of the Continent, and especially of France. John Stuart Mill's *Representative Government* and *Principles of Political Economy* (book v.), and Sir Arthur Helps's *Thoughts upon Government* may, however, be consulted. For the view of the MANCHESTER SCHOOL which is against Centralisation, see *e.g.* MALLET, *Free Exchange*, pp. 97, etc. Speech of COBDEN in ed. BRIGHT and ROGERS, vol. i. No. xx. pp. 362-3. ["Government will revert to something like the municipal system."]

T. H. E.

CERTAINTY. Certainty is an economic conception of great importance in several departments. The certainty of enjoying, partially at least, the fruits of one's own exertion is one of the principal elements in the efficiency of labour (contrast slave with free labour). In the accumulation of capital, and in the institution of private property, certainty is again fundamental. The essence of CAPITAL (*q.v.*) is held to be in the reservation of WEALTH for future consumption or the satisfaction of future needs, which implies that the fund reserved will be secured to a greater or less degree. The degree of certainty naturally operates upon the rate of interest when capital is lent. Certainty is also used in reference to taxation as regards the manner, time, and amount of payment, and as the basis of Adam SMITH's second canon. He considers certainty to be of such importance that a very considerable degree of inequality is "from the experience of all nations, not near so great an evil as a very small degree of uncertainty." In insurance the certainty attaching to groups, relatively to the uncertainty in the case of individuals, is the fundamental conception.

[Uncertainty of employment, as an evil of the present industrial régime, is dealt with by Prof. Foxwell in *Claims of Labour* (Edinburgh, 1886)].

J. S. N.

CERTIFICATE, SHARE. A broker, when he has bought shares in a company for a client, has to deliver a document called a certificate, which is the only visible sign of the property in the share. It is signed by one or more officials of the company, and when the shares are sold must in most cases be given up. Several decisions in the courts have shown that a certificate, although registered in buyer's name, is worthless in the event of forgery of the seller's name on the transfer, and no claim can be upheld against a company, notwithstanding the registration of transfer and issue by it of the certificate in the buyer's name. The FORGED TRANSFER Act, 1891, gives a company power to compensate a holder so defrauded, but a certificate is not absolute security. American railroad share certificates are peculiar; as the certificate may be made in the name of another person, whereas

the owner of the document may have paid for it without his name appearing as the owner either on the certificate or on the company's books. The American share document usually carries a transfer, and this is almost as usually left blank when the seller has given up his interest in the share, not naming the buyer. These certificates therefore pass very much as bonds to bearer. Awkward legal cases have arisen out of this loose custom. A. E.

CESARE, Carlo de, born at Spinazzola (Bari) 1824, died at Rome 1882. First as a deputy, and later as a senator, he was employed in reporting on important laws and charged with delicate commissions, such as the inquiry into the condition of the navy after the battle of Lissa, and on the state of Sicily in 1875. He was Counsellor of the "cour des comptes"; having been, before reaching this dignity, inspector-general of the banks of issue. He was the author of a manual of political economy, putting forward principally the doctrines of Ricardo; this book is useful even now on account of a chapter it contains of historical notices concerning political economy in Italy. *Manuale di Economia pubblica*, 2 vols. Torino, 1862. De Cesare wrote also upon a great many economical problems of the day in his country, and earned thus a considerable reputation as politician and practical economist.

The following list of his publications will give an idea of his activity:

Intorno alla ricchezza pugliese, Bari, 1853; *Il mondo civile e industriale nel secolo* xix., Napoli 1857; *Dell' industria asiatica*, Napoli 1857; *Della protezione e del libero cambio*, Napoli 1858; *Della proprietà intellettuale*, Napoli 1858; *Delle condizioni economiche e morali delle classi agricole* (published by the Accademia Pontoniana), Napoli 1859; *Dell' educazione alle arti e mestieri*, Palermo 1859; *Progetto di perequazione dell' imposta fondiaria per tutto il regno d'Italia*, Torino 1863; *Il credito fondiario e agricolo*, Torino 1863; *La legge dell' affrancamento del Tavoliere di Puglia e gli interessi economici delle provincie meridionali*, Torino 1863; *Il Passato, Presente e l'Avvenire della pubblica amministrazione del regno d'Italia*, Firenze 1865; *Disarmonie economiche*, Firenze 1865; *La finanza italiana nel* 1867, Firenze 1867; *Relazione sullo stato del materiale e sull' amministrazione della r. marina*, Firenze 1867; *Le due scuole economiche*, Firenze 1875. M. P.

CESS. The land-tax of Scotland, permanently fixed at £47,954 per annum, subject to a power of redemption. It is payable partly from burghs, and partly from shires; the incidence of taxation is determined by the local authorities. A. D.

CESSIO BONORUM. See Bankruptcy in Scotland.

CESSIONARY (Scots law term). Assignee.

CEVA, Giovanni, born in the province of Milan in 1647 or 1648—is a remarkable author, and will probably attract a growing interest, as the first clear-sighted and decided mathematical economist. He has also the merit of clearly defining *hypothetical* economics and insisting on *pure* economics as being the only possible exact science of which the subject permits the construction. He was by profession a mathematician and hydraulic engineer, and as such was several times employed by the government of Mantua. His death took place during the siege of Mantua in 1734.

Ceva's economical work has the following long title—*De re nummaria, quoad fieri potuit geometrice tractata, ad illustrissimos et excellentissimos dominos Præsidem, Quæstoremque huius arciducalis Cæsaræi Magistratus*, Mantuæ, 1711.

He divides the causes influencing the value of money into two groups: those which "extrinsecus adveniunt" and those which "ex nummo ipso procedunt." The "valor externus omnis rei nummariæ" varies in a direct ratio to the population and inverse ratio to the "quantitas rei." When "nummi ærosi" and "cuprei," are in excess of the quantity needed for small transactions true coin gets appreciated and *vice versâ* . . . "in eadem quantitate nummis aureis persistentibus eorum externi valores componuntur ex ratione quantitatum ærosæ monetæ et ex *reciproca quantitatum argenteæ*. As to the causes of variations in value classified as depending "ex ipso nummo," he enumerates the principal ones which can be called expenses of production, viz., the distance and nature of the mines, the expenses of coinage, etc.

Passages characterising his conception of economic science and his condemnation of inductive methods are the following: Magnum aliquid est commercium illud reconditum atque complexum, quo humana respublica, pecuniæ occulto gyro, florens atque incolumis perpetuo servatur; . . . sed huiusmodi naturam explorare difficillimum est, *nec aliter possumus, nisi quædam geometrarum modo ponantur*. Alias necesse est nos versari in quadam obscurissima nocte, nec de re huiusmodi posset quidquam constitui neque cognosci. . . . *Quibusdam petitionibus præfixis*, sic rem intellectui proponemus, ut si fieret, quod ratio admonet fieri debere, *geometrice ostendi possit, unde oriantur augmenta monetarum, et quot quibusque ex rationibus componantur valores ipsi nummorum*. Quamvis plura contingant, quæ *praxim minus exactam reddunt, regula tamen eiusque vis fixa atque immobilis perseverat*. M. P.

CHADWICK, Sir Edwin. This distinguished economist and statistician was born in 1800 and died at his residence at East Sheen, Surrey, on the 5th April 1890. He preserved his untiring energy and enthusiasm to the end of this long term of ninety years, and happily lived to see a vast degree of success resulting from the great social reforms he had instituted, fostered, and practically carried through to the advantage of the health, well-being, and general

improvement of his country. Born of a Lancashire family of the middle class, and with immediate ancestors gifted with little riches but with much earnestness of purpose, he had to work out his own way to fortune. Intended at first for the bar, Chadwick was soon forced to change his legal reading for the more immediately bread-winning occupations of reporting and review writing. A contribution of his to the *Westminster Review*, in 1828, on the subject of "Life Assurance," and another on "Preventive Police," gained him the acquaintance and support of Grote, the elder and younger MILL, and BENTHAM. Soon after the call to the bar of Chadwick, Bentham engaged him as an assistant to complete his own celebrated treatises on civil and penal legislation, and in this capacity Chadwick went to reside with the octogenarian philosopher until his death in 1832. Bentham left him a legacy and a small library, and would fain have wished Chadwick to have succeeded him in the propaganda of what may be called Benthamism. Fortunately Chadwick preferred a practical to a speculative career. National, social, and sanitary subjects, such as the condition of labour, the housing, living, and over-crowding of the population, and especially of the working classes, the improvement of the water supply of great cities, the interment of the dead in cemeteries removed from the immediate neighbourhood of the living, and other similar great questions, had become Chadwick's earnest study. His well-earned reputation for this soon led to his being offered and accepting official employment. In 1832, during the administration of Lord Grey, the first poor-law commission was appointed, and Chadwick's duty, in the post of assistant-commissioner to which he was promoted, demanded his personal visit to all parts of the country where investigation of facts seemed needful, and his collection of them led to such astounding revelations of the then condition of the labourer, of the poor, and of the evils to be remedied, that the government, impressed with the talent and genius displayed in his reports, appointed him a commissioner. The commission itself, of which Chadwick was the real heart and soul, carried out the most sweeping reform in the old English POOR-LAW system. Even this was not sufficient to satisfy his almost perfervid imagination of view of the advantages to be expected from a root-and-branch substitution of complete centralisation, in place of the excessive and costly decentralisation and its many abuses that were rampant when each of the 16,000 parishes of England looked to the wants of its own poor much in its own way. In 1833 Chadwick had the chief share in drawing up the report upon the condition of CHILDREN'S LABOUR which led to the Ten Hours Act. In 1834 he was appointed secretary to the new poor-law board, and during his tenure of that office for about twelve years his exertions for the public good were unceasing. In 1838 he presented a report of the commissioners on a special inquiry into the local and preventible causes of disease, and the improvement of habitations in the metropolis. This report proposed a venous and arterial system of water supply and drainage for the improvement of towns, and works for the application of sewage to agricultural production. Similar inquiries were pursued throughout England and Wales under his guidance, and led to very substantial reforms. His report of 1843, on the results of a special inquiry into the practice of interments in towns, formed the basis of the legislation which substituted a better system. In the same year he read to the Royal Statistical Society of London a paper on the best mode of representing by returns the duration of life and causes of mortality. In 1844, Chadwick suggested to Sir Robert PEEL the appointment of a Commission to make a general investigation into the national health and the best means of improving it. Quarrels ensued between Chadwick and the other commissioners, and the new poor-law board was dissolved. It was not perhaps to be expected that a man of the enthusiastic and optimistic type of Chadwick could steer clear of conflict with his colleagues. Nor can it be said with truth that there existed no well-founded cause of complaint on their part, for Chadwick was egoistic and dogmatic even when not positively domineering, and was gifted with a readiness of pen and a volubility of tongue which often wearied out his opponents. But as great public benefits often accrued from his contentions, the private evil to his colleagues does not count for much. Socially, as we and many of his survivors can vouch, Chadwick was a most interesting and valued acquaintance. The fact is that the necessity for speedy action to remedy evils glaring and grievous was so obvious that the urging of them on in a nation wedded as we are to a long retention of old forms and ways and systems, was a positive public good; and, in the case of Chadwick, the man was fortunately equal to the work. Sometimes, indeed, on occasions when he had to stir up apathy or LAISSEZ-FAIRE into reform, he was in the habit of profusely spicing his statements with statistics which would not bear the test of strict actuarial investigation, and which were incorrect in respect of their collocation with results, or of their comparative percentages. The year after the poor-law board was dissolved Chadwick was appointed one of the commissioners to inquire into the health of London, and in the next following year (1848) one of the commissioners of the general board of health, for improving the supplies of water, and the sewage, drainage, and cleansing of great towns. In the same

year he was nominated to the Companionship of the Bath, although he was not promoted to the knighthood of the order until 1889, the year before his death. When the board of health was dissolved, Chadwick retired upon a pension of £1000 per annum. But there was no retirement by him from the active pursuit of his life-long researches and labours for the practical advancement of all that concerns the health and educational and social progress of the nation. On sanitation especially he continued to be its chief authority to consult. He had much influence in such matters, for example, in the sending out of commissioners to the Crimea for the relief of our soldiers there. This was followed up in 1858 by inquiries into the heavy mortality amongst the troops in India, a subject he fully explained in a paper, "On the application of Sanitary Science to the protection of the Indian Army," read before the Social Science Congress at Liverpool. In 1860 he was vice-president of the public health department of the meeting of the same congress at Glasgow, and delivered a remarkable address on sanitation. In 1861, he followed up the same subject, as president of the section of economic science and statistics, at the health association at Cambridge. It would be tedious to prolong the list of his contributions, from 1861 to 1890, to the journals of all the numerous scientific societies to which he belonged, and for whose researches and practical public objects he continued to labour to the end of life. A long career thus well spent deserves the gratitude alike of his contemporaries and of posterity. England certainly has erected statues and memorials of many men of far inferior worth to Chadwick. There remains, however, an ever-present memorial of him in the improvements that have taken place in this country in almost every direction that he laboured in, and which are briefly indicated in the present outline of the chief points in his biography.

See *The Health of Nations, a Review of the Works of Edwin Chadwick, with a Biographical Dissertation*, by B. W. Richardson, 2 vols., 8vo, London, 1887. Chadwick's papers, printed in the *Journal of the Royal Statistical Society*, extend over a period of thirty-six years. Their titles are—"On the best mode of representing by Returns the Duration of Life and Causes of Mortality," vol. vii. p. 1.—"On the Economical, Social, Educational, and Political Influences of Competitive Examinations, as Tests of Qualification for Admission to the Junior Appointments in the Public Service," vol. xxi. p. 18.—"On the Progress of the Principle of Competitive Examination for Admission into the Public Service, with Statistics of Actual Results and an Investigation of some of the Objections raised," vol. xxii. p. 44.—"Results of Different Principles of Legislation and Administration in Europe; of Competition for the Field as compared with Competition within the Field of Service," vol. xxii. p. 381.—"Post-Office Savings' Banks," vol. xxiv. p. 519.—Address as President of Section F. ("Economic Science and Statistics") of the British Association, October 1862, printed, vol. xxv. p. 502.—"On the Subject Matters and Methods of Competitive Examinations for the Public Service," vol. xxvi. p. 72.—"Poor-Law Administration, its Chief Principles and their Results in England and Ireland as compared with Scotland," vol. xxvii. p. 492.—Opening Address, as President of the Department of Economy and Trade, at the Meeting of the National Association for the Promotion of Social Science, York, 1864, printed, vol. xxviii. p. 1.—"Treatment of Pauper Children on a Larger Scale," table illustrative of school organisation for reducing expenses with increased efficiency, vol. xliii. p. 245. F. H.

CHAFFER, now a verb, was originally a noun, and meant a journey for the purpose of buying and selling, from the words *chap* (as in *kaufen*, *caupo*, *κάπηλος*), and *fare*, a journey. Chap appears in chapman or merchant, also in cheap, which was at first a noun, and meant simply market, as in Eastcheap, and Cheapside. Articles sold on terms favourable to the buyer were to him "good cheap" or good market (compare "bon marché"). The adjective was dropped and the substantival character forgotten; hence the adjective "cheap." Chaffer in popular language is a form of what Adam Smith calls Higgling of the Market, or the disputing of buyer and seller, which is the usual preliminary to the striking of a bargain; but it is used of retail dealers and their customers more often than of wholesale; and is associated rather with petty than with important interests. [See also Chapman.] J. B.

CHALMERS, George (1742-1825), Scotch antiquarian, historian, and economist, born at Fochabers in Moray, and educated there and at Aberdeen. He afterwards studied law at Edinburgh. He went to America, and practised as a lawyer at Baltimore. Returning home at the beginning of the civil difficulties in 1775, he settled in London. He was appointed, 1786, chief clerk of the committee of the privy council for trade and foreign plantations. His works were chiefly historical and antiquarian, including the well-known *Caledonia*.

His economic works, as their titles suggest, are chiefly statistical, and as such are of the very highest importance; the *Estimate* in particular furnishing the student with valuable information, which, bearing in mind Chalmers's official position, may be deemed more than usually trustworthy. In his *Considerations on Commerce* he deals with more theoretical matters, committing himself to the opinion that the high price of Bullion was owing to the state of the Foreign Exchanges. It cannot, however, be said that his arguments or facts tend to establish his position.

His economic works were as follows: *The Propriety of allowing a Qualified Export of Wool*

discussed historically, 1782.—*An Estimate of the Comparative Strength of Great Britain during the Present and Four Preceding Reigns*, 1782.—*Opinions on Interesting Subjects of Public Laws and Commercial Policy arising from American Independence*, 1784.—*Observations on the Strength of England in 1696, by Gregory King, with a Life of the Author*, 1804.—*A Chronological Account of Commerce and Coinage in Great Britain from the Restoration till 1810*, 1810.—*Considerations on Commerce, Bullion and Coin, Circulation and Exchanges, with a View to our Present Circumstances*, 1811 (3d ed. 1819).

There is also attributed to him, but on very slender grounds, a small anonymous pamphlet entitled *Useful Suggestions favourable to the Comfort of the Labouring People*, 1795. E. C. K. G.

CHALMERS, THOMAS (born at Anstruther in Fife 1780, died at Edinburgh 1847), the son of a prosperous merchant, and the sixth of a family of fourteen children, was educated at St. Andrews University, and became minister of Kilmany parish 1803. He was at first more attached to mathematics, physics, and political philosophy than to theology; and brought himself into notice by his scientific lectures given at St. Andrews, first for the university and then in competition with it. In 1808 he published *An Inquiry into the Extent and Stability of National Resources*, in connection with the continental BLOCKADE. The doctrines of this pamphlet were incorporated with his *Political Economy* (ch. vi. p. 221 of vol. xix. ed. Collins), under the heading "Limits of a Country's Foreign Trade, and its supposed power to furnish a people with Employment and Maintenance." In 1815, transferred to Glasgow, he carried out his famous voluntary organisation of charitable relief, to show (as he expressed it) the "sufficiency of the parochial system" and the needlessness of a Poor Law. The scheme worked successfully for more than twenty years. Chalmers was professor of moral philosophy and political economy in St. Andrews (1825–1828), and then of divinity in Edinburgh (1828–1843), holding the latter office till the Disruption of the Church of Scotland in 1843, and the formation of the Free Church, in whose service he laboured (both in its college and in its church courts) to the day of his death. It was no doubt a bitterness to him that by aiding this schism he helped to bring about the establishment of a POOR LAW in Scotland, which took place in 1845, two years before his death.

In his book on *Political Economy* (1832) his aim is not to develope a body of doctrines but to secure the moral and thereby the economic elevation of society. Political economy, in the sense in which he treats of it, is regarded as aiming at the "diffusion of sufficiency and comfort." Economists and ecclesiastics (he repeatedly says) have stood too much aloof from each other; and for his part he will write as an ecclesiastic who recognises the value of economics. He follows Adam SMITH and MALTHUS, rather than RICARDO, accepting the "Ricardian" theory of rent with the modifications of Malthus and Perronet THOMPSON, and the theory of population with less reserve than its author ("Population tends to double itself in *fifteen* years," *Pol. Econ.* ch. xiii. p. 382). Like J. S. MILL (see *Dissert.* ch. ii. p. 183, "Claims of Labour," written 1845) he saw that the theory of population, instead of closing the way to progress, had really for the first time opened it. He regards the theory of Malthus as the *vinculum* between moral character and economic comfort. "By the indefinite control which the collective mind and habit of society have over the element of population, the general standard of enjoyment in a country is capable of being indefinitely raised" (ch. i. p. 44); and, as a matter of fact it has been raised: "The labourers of our day work harder than before but live better than before." "The rate of wages depends on the proportion which the inclination of the people for marriage bears to their inclination for the comforts and decencies of life" (ch. ix. p. 279); and without a Christian education to give self-control progress cannot be assured. The philanthropy of the few cannot save the many from "that most overmastering of all oppressions, the oppression of their own numbers" (*ib.* p. 285). Neither home colonisation (on Dutch or other models), nor emigration, which is a worse alternative, nor a Poor Law, which is worst of all, can do more than cause multiplication and misery. Government can administer justice, but humanity is out of its province (*Chr. and Econ. Pol.*, pref. viii.) He speaks of the fallacy of "finding employment" for the poor. People forget that a manufacture is creative of nothing but its own products; the equivalents of these products must come from elsewhere. The benefit of a FOREIGN TRADE, too, lies simply in the article it brings us; the tea trade gives us tea, and if it were abolished we should lose tea, and nothing more (ch. ii. pp. 63, 67, etc.) Chalmers, therefore, thinks lightly of the loss of foreign markets. In his book on *Christian and Economic Polity* (ch. xxii.) he says quite truly "that the worth of that *by* which a thing is done is all derived from the worth of that *for* which the thing is done;" but from that and similar maxims (there and in the *Pol. Econ.*) he argues in a way that would logically lead to the conclusion that it is indifferent to a shopkeeper whether we deal with him or not (see Mill, *Unsettled Questions*, pp. 53 *seq.*) He saw that the importance of the home trade had been under-estimated by statesmen like PITT, who idolized foreign trade; but he went too far in asserting that it was the destruction of British trade that made Britain successful against Napoleon (see *Pol. Econ.*, ch.

viii. p. 264). His own idol is AGRICULTURE, as giving not merely "employment" but "maintenance"; as long as agriculture is unaffected, any stoppage of trade is "only a shift, not a subtraction" (*Chr. and Econ. Pol.*, ch. xxii.) In everything except agriculture there may be over-supply, over-population, and over-supply of capital—too many ploughmen and too many ploughs. If either the "appetite for present indulgence" or the "appetite for future wealth" were to become universal, society would lose its balance (*Pol. Econ.*, ch. iv. p. 127). As population follows food, capital follows openings in business; and, where they fail, *it* becomes *de trop*. Like the PHYSIOCRATS, Chalmers considers that all taxes fall eventually on the net RENT OF LAND, and should therefore be placed there directly, and the landowning class, as they bear all the burdens of the country, should have all the political power. He would maintain PRIMOGENITURE to prevent "infinite subdivision" of lands, and to secure that the ship of state shall not have more sail than ballast (*Pol. Econ.*, ch. xvi.) He assents to repeal of the CORN LAWS and commutation of TITHES; but he thinks the good effects will be transitory, the real causes of distress being over-speculation and over-population (ch. ix. p. 303). He is against the FUNDING SYSTEM, government loans being always, he says, paid twice over by the public, first in the form of high general prices caused by the withdrawal of the capital lent, and afterwards in repayment of the principal to the lenders (*Pol. Econ.*, Append.) Government should raise enough for the year's needs by taxation within the year. Finally, it may be noted that he stands by his order when he refuses to confine the term productive labour to labour that produces material objects, to the exclusion of professional labours like his own.

Perhaps Dr. Chalmers is better known to later economical readers by his phrases than by his doctrines. As he has made current in ethics "the expulsive power of a new affection," so he has given to economics "the margin of cultivation" (*Pol. Econ.*, ch. i. pp. 19, etc.)—"Disposable population" (or non-agricultural), "secondaries" (makers of secondary necessaries), "rotation" (or transfer as opposed to creation of wealth), were less happy; but, as John Mill says, Chalmers has always "the merit of studying phenomena at first hand and expressing them in a language of his own" (Mill, *Pol. Econ.*, i. v. § 7). Mill was specially referring to the explanation given by Chalmers of the rapidity with which a country recovers from a war in which it has been overrun by the enemy. The reason was not to be sought in any mystical *vis medicatrix naturæ*, but simply in the everyday fact that the greater part of CAPITAL, fixed as well as circulating, is being constantly renewed by human efforts year by year, and the stimulus of higher gains than usual will lead to an energetic direction both of the "immediate" and of the "antecedent" labour on the most urgently needed production. "By one revolution of the economic cycle the circulating capital would be nearly restored; and by a few revolutions more the fixed capital would be fully restored, not by the parsimony of successive generations, but by the privations of a few successive seasons" (*Pol. Econ.*, ch. iv. § 13, pp. 140-142). It may be added that our author anticipated Mill in maintaining, against the opinion of Adam Smith, that the STATIONARY STATE of wealth and population might be happier than the progressive (*Pol. Econ.*, vol. xx. ch. xv. § 12, p. 28).

(1) *An Inquiry into the Extent and Stability of National Resources*, 1808.—(2) Vol. vi. *Commercial Discourses* (in Works, published by Collins, Glasgow, twenty-five volumes, 1836-42).—(3) Vol. xiv. to xvi. *On the Christian and Economic Polity of a Nation, more especially with reference to its Large Towns* (an expansion of "*The Christian and Civic Economy of our Large Towns*," 1821).—(4) xvii. *Church and College Establishments* (a defence of endowments against Adam Smith and Turgot).—(5) xix., xx. *On Political Economy in Connection with the Moral State and Moral Prospects of Society*.—(6) xxi. *On the Sufficiency of the Parochial System*.—(7) *Ib. On the Application of Statistics to Moral and Economical Questions*.—(8) Sundry economical articles in *North British Review* ("Corn Laws," "Political Economy of the Bible," "Poor Laws of Scotland," "Savings Banks," "Stirling's Philosophy of Trade," "Political Economy of a Famine"). For criticism, see M'Culloch's *Literature of Political Economy* (1845), and his article on "Chalmers's Pol. Econ." in *Edinburgh Review*, October 1832. J. B.

CHAMBERLAYNE, EDWARD, LL.D. (1616-1703). His reputation rests on his statistical and descriptive work, *Angliæ Notitia*, which went through no fewer than twenty revised editions under his name, and was then (1704) continued by his son John Chamberlayne, the last edition being issued in 1755. It consists of three parts, the first relating to history and general conditions, the second to government, and the last to manners and customs. Chamberlayne's work was the Whitaker's Almanack of the period. Its information is varied and detailed, but only in certain cases are the statistics given available for use at the present time. Such statistics are more frequent in the later issues of the work, where reference is frequently made to the estimates of PETTY, DAVENANT, and KING, though even in the early editions the description of the trades and the economic condition of the people occupies a prominent place.

The Rise and Fall of the Late Favourite of Spain, the Count Olivares, 1632.—*The Present Warre Paralleled: or a Brief Relation of the Five Years' Civil Warres of Henry the Third*, 1647.—*England's wants, or General Propositions probably Beneficial for England, humbly offered to*

the Consideration of all good Patriots, etc., 1667. —*Angliæ Notitia, or the Present State of England*, 1669, also other works, educational and religious.

E. C. K. G.

CHAMBERLEN, Hugh. Hugh Chamberlain, Chamberlin, or Chamberlen (born 1664, died 1728), son of a court physician of the same name, was educated at Trinity College, Cambridge. He devoted himself, like his father, to obstetrics, and is said to have practised in France and Holland before finally building up a professional reputation in his own country. But as early as 1693 he took the field as a financial projector. In that year, after vainly approaching the Scottish parliament on the subject, he induced the English House of Commons (Dec. 1693) to submit his plan for a land bank to a committee, which reported in its favour. No effect, however, was given to its recommendations till 1696 (10th Feb.) when Foley and Harley procured an act in favour of the land bank. William was in need of money for his continental war; and the reform of the currency had brought the Bank of England into difficulties of which the goldsmiths and the country gentlemen were inclined to take full advantage. The Bank of England at its foundation in 1694 had lent to government £1,200,000 at 8 per cent; Chamberlain offered to find more than 2 millions at 7 per cent, the security to be a special salt tax, and the subscribers to be incorporated, in recognised rivalry with the Bank of England, for the lending of money on land securities, at 3 to 4 per cent interest, and with paper issues limited for each year to the total amount of the loan to government. The scheme was vigorously pushed, but the subscriptions were not completed within the date fixed by the act of foundation, and Chamberlain seems to have lost money as well as reputation. He retired to Holland in 1699; and after two fresh attempts, still unsuccessful, to recommend his project to the Scottish parliament (1700, 1705) he seems to have quietly resumed his professional work in England, where he died 1728.

Chamberlain's land bank was open to the general criticism that applies to all schemes for the issue of a paper currency based on land securities;—the securities are not speedily and certainly convertible, and they are not everywhere negotiable. But it had special defects of its own. The security proposed was lamentably inadequate. Its calculations were drawn up on its projector's curious idea that the value of an estate is in direct proportion to the length of time from which an income is derived from it. Chamberlain offered, for example, to give eighty years' purchase for a rent charge of £100 for 100 years, from property in land. The market value of the fee simple in those days would have been about twenty years' purchase, or one-fourth of Chamberlain's estimate.

[Macaulay, *History of England*, ch. xx., xxii.—Thor. Rogers, *First Nine Years of the Bank of England* (Clar. Press, 1887), ch. ii.—Anderson, *Hist. and Chron. Deduction of Commerce*, vol. ii. year 1696.—Macleod (H. D.), *Dictionary of Pol. Econ.*, gives a useful list of his pamphlets (art. "Chamberlain").]

J. B.

CHAMBERS OF AGRICULTURE are, in the United Kingdom, voluntary associations for collecting, maturing, and expressing the opinions of persons engaged in or familiar with agricultural pursuits on public questions concerning the well-being of the agricultural interest. All the chambers now in existence have been formed within a relatively brief period. Their origin may be traced to the general recognition, in the period 1862-1865, of the want of any adequate machinery for ascertaining the balance of opinion among agriculturists, and, in particular, in the last named year, to the absence of official acquaintance with agricultural conditions, and the helplessness and isolation of the farming classes in the face of the disastrous invasion of cattle plague at that date. The functions of these chambers differ from those of the older farmers' clubs and agricultural societies by including discussions on matters of a distinctly political or economic character. By means of the central chamber in London and the intervention of a representative council, opportunity is given to concentrate and focus the separately expressed views of agriculturists, and, where anything like unanimity is found to prevail, for bringing pressure to bear on the legislature in cases of necessity.

The first formed chamber was the Scottish, in 1864. In organisation it differs somewhat from the English chambers by its membership being more closely restricted to actual tenant-farmers or owners farming their own land. While in corresponding association with the central chamber, its business is independently conducted by means of a board of directors in Edinburgh aided by county committees. The English central chamber was projected by Mr. Charles Clay of Wakefield in 1865, and, since its establishment in 1866, its chairmen, chosen as a rule alternately from different political parties, have been among the most prominent or characteristic leaders of agricultural opinion in parliament. The membership of the central chamber embraces leading agriculturists residing in all parts of England, and includes many peers and M.P.'s. The local chambers for the most part are formed for complete counties. In some instances branch chambers reporting to the county chamber are formed. In others an area less than that of a county is chosen as the district of the chamber where special local or market facilities have established an individuality of agricultural character. Recently, in an increasing number of cases, certain farmers' clubs or societies have

become chambers by adding the special debating functions of a chamber to their primary work, and by affiliating themselves with the central organisation. The membership of all the English chambers has been gradually increasing, and the total includes landowners, yeomen, and tenant-farmers, and other persons engaged in businesses dependent on agriculture. But the strength and activity of the several local bodies varies very greatly. Some are small, and in others, where the numbers are large, much of the work is left in the hands of standing committees of the more active and intelligent members, owing to the practical difficulty of obtaining largely attended meetings among a community so scattered as the farmers. No chamber possessing less than fifty members is recognised by the central association, and the representatives of a hundred and ten active and fully accredited chambers now meet the representatives of the central chamber periodically in London in a body known as the Council of the Central and Associated Chambers of Agriculture. Its deliberations are generally accepted as affording a fair index of the drift of agricultural opinion;—and an enumeration of at least some of the more prominent subjects dealt with by this Council in recent years, will afford the readiest means of appreciating the class of business—political, social, and economic—coming under discussion by the chambers of agriculture.

Partly from the circumstances above referred to in connection with the origin of the chambers, and partly from the events of recent years, no subject has had a greater prominence than that of the repression of cattle disease. Questions of the regulation of the home trade and traffic in animals, the restriction or stoppage of importation from countries infected with contagious diseases, and the treatment of outbreaks of cattle plague, pleuro-pneumonia, and foot-and-mouth disease have been under frequent consideration, and much of the existing successful legislation on this subject, and the policy adopted by successive governments, as well as the altered position of public opinion generally, has been admittedly due to the initiative and pressure of the agricultural chambers.

The incidence and distribution of taxation in rural districts have naturally furnished another important series of questions for the consideration of the chambers. The incidence of rating, the special burdens falling on land, the relief of localities from the entire cost of obligations imposed for national objects, the improvement of our systems of poor-law relief, of valuation and assessment, the management of highways and main roads, and the reform of local government, have all been largely discussed, and effect given in various instances to the views of the chambers. Questions also of imperial taxation, the adjustment and collection of the income tax, the malt tax, and the beer duties have led to frequent communication between the chambers and the executive government. More recently, and under the pressure of agricultural distress, it has been observed that a disposition exists among some of the local chambers, especially in wheat-growing districts, to raise discussions on the propriety of reverting, in some form, to import duties on competing foreign produce.

The methods for effectively compensating outgoing tenants for the unexhausted value of improvements effected on their farms have been the subject of prolonged inquiries set on foot by practical and experienced committees of the chambers of agriculture, and to these efforts must be ascribed a large share in securing the Agricultural Holdings Acts.

The relations of the various railway companies with the agricultural producers have been frequently debated, and legislation has been secured forbidding the preferential railway rates allowed to foreign produce. The chambers were also very largely occupied in such questions as the prevention of food adulteration, the securing of purity in fertilizers and feeding stuffs and the provision of agricultural instruction.

Among the earlier debates of the chambers, the question of amending the game laws was prominent. Legislation accordingly was passed in 1880 and 1908. Various reforms of the existing land laws have furnished topics for debate, especially in the Scottish chambers, while a consolidation of the scattered functions of the government in relation to agriculture has always been a favourite recommendation, realised in the Board of Agriculture and Fisheries. Apart from the discussion of questions more or less matters of controversy, the machinery of the chambers has been used for spreading information on agricultural matters, and in some instances for the diffusion of agricultural education and the conduct of practical experiments. P. G. C.

CHAMBERS OF COMMERCE, or at least bodies similarly named, flourished on the continent and in the United States, the New York Chamber of Commerce, for example, being incorporated under a Georgian charter before their rise is noted in Great Britain. One at Marseilles is reported as existing in the 14th century. Chambers in several of the chief cities of France are mentioned early in the 18th century. It would appear that these bodies were suppressed in France in 1791, but restored by official decree in 1851. The foreign type of chamber has, in its quasi-official character, always differed from the purely voluntary form of association for promoting trade interests, recognised as a chamber in the United Kingdom. One of the earliest chambers here is that of Glasgow 1773. Edinburgh possessed a chamber in 1785, Manchester in 1820, and Hull in 1837. Originally chambers were formed with purely local objects, as the promotion or protection of particular

businesses. A federation of individual chambers of commerce for concerted action on common subjects of general interest was, however, suggested at a meeting of the Social Science Association in 1859 ; in the following year what is now known as the Association of Chambers of Commerce of the United Kingdom held its first annual gathering. The chambers of Belfast, Birmingham, Bradford, Glasgow, Gloucester, Hull, Kendal, Leeds, Liverpool, Norwich, Sheffield, Southampton, Staffordshire potteries, Wolverhampton, and Worcester, took part in this movement, Coventry and Dundee being also in communication with the central body. Some of the larger provincial chambers did not at first join the central body. Glasgow at the present time is the only one of the larger members which keeps aloof. But the formation of local chambers and their affiliation with the central association has proceeded rapidly ; twenty-seven bodies being thus connected in 1865, forty-six in 1873, and 117 at the present time (1910).

The London chamber of commerce, although one of the most recently formed, and dating only from 1881, is the largest existing chamber, with (1902) a membership of over 4000, individuals and firms, and an annual income of £8000. It is an entirely voluntary organisation independent both of the Government and of the municipality of London. Its sphere of activity extends practically over the commercial world. Its work is to facilitate business in the broadest sense,—incidentally this tends to prevent strikes and lock-outs in the port of London,—to supply information as to commercial treaties, and to improve commercial education. The size and relative importance of the provincial chambers of commerce varies very greatly. In the case of the larger bodies such as Manchester, Glasgow, and Liverpool, the work of each chamber embraces different interests and is divided into three or four trade sections ; the smaller chambers usually exist in towns where there are but one or two prominent trades of which a single general committee can be made fairly representative.

In the case of the London chamber a more general sphere of duties is necessarily entered on than is attempted elsewhere. Besides possessing direct relations with thirty-two separate affiliated associations, among which very important special bodies like the institute of bankers, the London corn trade, London timber trade, shipowners' societies, etc., are represented, there are here over forty organised "trade sections." Separate provision is thus made for the East Indian, the Canadian, the Australian, and the African trades, the metal, textile, provision, and many other groups of businesses. To an extent unknown among the older chambers, the London chamber endeavours to collect and disseminate statistical and other information, and to promote, by the holding of public conferences and lectures by distinguished explorers and others, a knowledge of new openings for foreign trade. The services of the commercial chambers have been made practically useful in cases of mercantile arbitrations. Their advice is frequently sought on specific points by the government, and at their suggestion much additional information is obtained from consular representatives abroad and circulated widely.

It may be interesting, however, in further illustration of the range of business, to quote a few of the earliest and of the most recent topics of debate in the biennial meetings which take place of the delegates of these chambers in the central association. But when it is remembered that as many as sixty different topics have been occasionally disposed of, besides purely formal business, at a single three days' meeting of the central association, it will be seen that no enumeration of the functions of these bodies can pretend to be exhaustive. Among the subjects prominently recurring in the earlier years of the association's existence, and still in some form under discussion in 1886, 1887, and 1888, may be named the improvement of the laws of bankruptcy and of partnership, of legal and county court facilities, of the extension of postal and telegraphic facilities, and the bearing of foreign tariffs and consular arrangements on British trade, as well as a numerous group of questions of internal taxation, shipping dues, local tolls, and assessments. Discussion on patent-law reforms, on uniformity of weights and measures, and on tribunals of commerce were perhaps more notable in the earlier years, while debates and suggestions on the regulation of railway charges, on the constitution of a ministry of commerce, or on improvements in parliamentary and private bill procedure, come more frequently under notice in the later years. In the past quarter of a century, during which the machinery of these chambers has been more especially developed, their activities have taken a wide range, which is summarised in "The London Chamber of Commerce and its Work" by Mr. C. E. Town.

To illustrate the class of subjects with which chambers of commerce actually deal, we may remark that a list of the business transacted under the auspices of the London chamber alone, in the past twenty-eight years, embraces the following numerous and varied items :—The Anglo-French Treaty negotiations, affairs in Burmah, Postal and Telegraphic Rates, Coffee Adulteration, Bills of Lading Reform, Bankruptcy Law Reform, the Suez Canal, the Anglo-Spanish Treaty negotiations, the Coal and Wine Dues, Arbitration and Codification of the Laws relating thereto, Dock Charges, the Congo Treaty, Thames Communication, Railway Communication and Extensions in India and the Colonies, Home Railway Rates and Fares, Indo-Chinese Railways as projected by Messrs. Colquhoun & Hallett, the development of South Africa, the London Corn Dues, Commercial Treaties

with Foreign Countries, Sixpenny Telegrams, Colonial and Imperial Federation, Emigration, the Merchant Shipping Bill of 1884, Trade Marks, the preparation of Average Wages Tables, the questions of the Royal Commission on Depression of Trade (to which the Chamber replied), organisation of seven Congresses of Chambers of Commerce of the British Empire, the Colonial and Indian Exhibition of 1886 (in which the West African Court was initiated by the Chamber), the State Guarantee of War Risks, Code Telegraphy, Technical and Commercial Education, Protection from Fire in London and Fire Insurance Rates, Codification of the Factors' Acts, Canadian Preference Claims, Commercial Museums, the Imperial Institute, the Silver Question, the Shop Hours' Regulation Bill, the Baku Petroleum Conference, Decimal Coinage, Post Office Investments, Colonial and International Exhibitions, Income tax, the Japan and Franco-Chinese Treaties, the Merchandise Marks Act, 1887, the Submarine Telegraph Monopoly, Railway Rates, Port of London Authority, Labour Conciliation and Arbitration Boards, and a varied range of topics of an industrial or commercial character. P. G. C.

CHAMBRE ARDENTE. This name, though most commonly used in relation to occasional tribunals erected in France for the examination of persons accused of heresy or poisoning, was applied to all extraordinary commissions, established outside of the ordinary course of law, for the trial of alleged criminals of whatever kind. Thus the student of the economic history of France will find the title given to the commissions appointed in the reign of Louis XIII., and under the regency, to inquire into the frauds of the farmers of the public revenues and to enforce restitution of their unlawful gains. Accordingly Littré, in his French Dictionary, gives as the more recent meaning of the term "commission nommée pour connaître des malversations de deniers publics, etc."

[See also *Dictionnaire de la Conversation et de la Lecture*, tome xiii., under the head "*Chambre*," and H. Martin's *Histoire de France*, Index, *s.v.*]

J. K. I.

CHAMILLART, Michel de (*b.* 1653, *d.* 1721). After filling several minor positions Chamillart, by favour of Madame de Maintenon, was set in 1695 over the school at Saint Cyr,—then a recognised stepping-stone to high office in the state. Appointed controller-general of finance in 1699, and minister of war in 1701, he combined for seven years the *rôles* which, taken singly, had taxed the respective energies of Colbert and of Louvois. Without aptitude for either office, he wore himself out to little purpose. According to Montyon (*Particularités sur les ministres des finances*, 1812, p. 87), the last argument always appeared to Chamillart the most convincing, so that his studies were filled with unexecuted draughts, referred alternately to their promoters and their critics. The popular songs of the day, probably influenced by the necessity of rhyming his name, represent him as the king's boon companion at billiards—"a hero at billiards, a zero in the ministry," etc. His want of administrative ability was well known to the public, and he frequently appealed to the king to be relieved from burdens which he felt unable to support. But the Grand Monarque, who had said *L'État, c'est moi!* had encouraged Chamillart to assume office by the promise "I will second you," and still flattered himself that he could train a minister or repair his deficiencies. Chamillart was, therefore, retained in office until, in 1708, he resigned the ministry of finance, and a year later, having given umbrage to Madame de Maintenon, was called upon to quit the ministry of war.

Historians are agreed as to the personal probity and amiability of Chamillart, no less than as to his ineptitude. His term of office, however, included a period of seven years' disastrous war, during which desperate expedients were almost forced upon a financier of less than the highest ability. The measures of Chamillart are examined by the judicious Forbonnais (*Recherches et considérations sur les finances de France*, 1758, ii. 104, 109-171), who gives him credit for establishing a special council of commerce to deal with state matters of industry and trade. It was by Chamillart that Boisguillebert was deprived and punished for publishing his *Factum de la France*, 1706.

[For some graphic touches descriptive of Chamillart see the *Mémoires* of his friend St. Simon.—Vuitry, *Le désordre des finances à la fin du règne de Louis XIV.*, 1885, pp. 138 *seq.*, emphasises the ruinous nature of his makeshift finance.]

H. H.

CHAMPART. The right of the feudal lord in many parts of France to receive a fixed share of the tenant's produce. It was collected after the ecclesiastical tithe, and the proportion varied in different districts according to custom or agreement. Sometimes it was a fourth or a fifth, but occasionally it was as little as a twentieth. The lord's share is known by the various names of *champart*, *agrier*, and *terrage*.

R. L.

CHAMPION AND SEVERALTY. The change from champion, or the system of common lands and common cultivation, to severalty was the first act in the history of enclosures, the second act in which took place in the reign of George III. The first period, during which the tendency to enclosure was denoted by the terms used above, consisted chiefly of the reigns of Henry VII., Henry VIII., and Edward VI., though it must not be supposed that it was rigidly confined within these boundaries. Two movements may be detected on a close examination. The first, the turning of arable into pasture land; the second, the "violent inclosure of commins without just recompence of them that have right to commen therein" (Stafford's *Brief Conceipt*, N.S.S., p. 41). But both these move-

ments were denoted by the term enclosure, and it was into their common action that a commission of inquiry was appointed in 2 Edward VI. By enclosure, said John Hales, is meant "when any man hath taken away and enclosed any other man's commons, or hath pulled down houses of husbandry and converted the lands from tillage to pasture" (Strype, *Eccl. Mem.* ii. pt. ii. p. 362, cf. *Brief Conceipt, ut supra*). The nature of the change is not hard to understand. The effect of the BLACK DEATH (*q.v.*) had been to materially accelerate the dissolution of old habits of cultivation and the introduction of a system of pecuniary payment in place of the interchange of dues and privileges. Leases had been granted, and the semi-feudal ties connecting landowners and labourers were snapped. There was another change in progress of importance equal to this. Though towns and hamlets dependent on husbandry were decaying (Strype, *ut supra*, p. 352; Stubbes, *Anatomie of Abuses*, p. 116), the more mercantile communities were rising in wealth. The era of trade and manufacture was opening. We begin to catch glimpses even of the system of concentrated industries (or those organised in large establishments). The effect of this system was, however, felt forcibly only towards the close of the Tudor period. During the earlier reigns, though trade was developing, its progress was not evident enough to be recognised as mitigating the suffering consequent on so great a change as that described. Other causes served to heighten the discontent, while it intensified the real suffering. There was continual debasement of the coinage. Prices were changing, and all prices, *e.g.* the prices of labour and commodities, did not change at the same time, or in the same rate (*v. The Brief Conceipt*). Again, the dissolution of the monasteries left the poor without their most common source of relief. Thus it came about that the change from champion into severalty, while necessarily a source of distress, was but one, though by far the greatest, of several changes leading to social disorganisation. Such is the position to be assigned to it as an influential event of the 16th century.

Viewed in its relation to the after history of England, in connection with the later repetition of the policy of enclosure, its results are important indeed. They may be summarised as follows:—(1) Large ownerships in land encouraged, small ones discouraged; (2) the yeoman class deprived of its importance; (3) consequent tendency on the part of those with small fortunes to occupy themselves in trade rather than in agriculture.

[Harrison, *Description of England.*—Stafford, *Brief Conceipt of English Policy.*—Starkey, *England in the reign of Henry the Eighth.*—Latimer's *Sermons.*—Tusser, *Five hundred points of Husbandry.*—Stubbes, *Anatomie of Abuses.*—Strype, *Ecclesiastical Memorials.*—Nasse, *Ueber die Feldgemeinschaft in England.*—*Report of Select Committee of the House of Commons*, 1844, vol. v.—For a description of the system of common cultivation *v.* Seebohm, *English Village Community.*]

E. C. K. G.

CHANGE. Abbreviation for EXCHANGE (*q.v.*)—(1) The meeting of bankers and merchants for the transaction of business; (2) the place where they meet. In London there are separate exchanges for the various classes of business. The Royal Exchange is used alternately for transactions in foreign bills and for business in drugs and chemicals, and there are, besides the stock exchange, the corn exchange, the metal exchange, the hop exchange, the wool exchange, the coal exchange, etc. The "Commercial Sale Rooms" in Mincing Lane and the "Baltic," though not called exchanges, are used for similar purposes.

This word is also used for small coins, etc., given in exchange for one, or perhaps more, coins or notes, and in the aggregate of similar value: the balance returned in cash when goods of one value are purchased with money of a greater value. One of the advantages of the cheque over coins or notes of specific amounts is that it can have assigned to it any required amount, and that *change* is rendered unnecessary.

E. S.

CHANGE (AGENTS DE)—the official name of the licensed brokers who possess in France the exclusive privilege of negotiating the purchase and sale of public securities. As early as the 16th century the State exercised a control over the business of *courtier* or broker for the exchange of money or merchandise by requiring agents to obtain letters of license. The next step was to limit the number, to exact payment for the monopoly, and to fix the rates of brokerage. At one time the exercise of the office was hereditary. In 1720 the two branches of the profession were separated, the name of *courtier* being reserved for brokers in merchandise, while that of *agent de change* was created for intermediaries in letters of exchange and moneys. A great number of decrees and ordinances regulating the privilege were issued down to the Revolution, when the business of agent de change was made free, but after the re-establishment of order the monopoly was revived, and the privilege was affirmed by art. 76 of the Code de Commerce promulgated in 1807. A law of 1816 fixed the number of *agents de change* in Paris at sixty, and conferred on them the right to nominate their successors, subject to the approval of the corporate body and the Minister of the Interior. As their number has since remained unchanged, the value of the office has increased with the immense expansion of business. The first transfer made was for a premium of £1200, but the purchase price has since risen as high

as £90,000, although it varies with the standing of the holder of the office transferred, the amount of business transacted by the different *agents de change* being very unequal. Sleeping partners generally supply the greater part of the capital, the nominal holder contributing the business qualifications, which are to have been employed not less than four years with an *agent de change*, a banker, or a public notary. Besides the various laws relating to *agents de change*, which were codified by a decree of 7th October 1890, in eighty-four articles, the discipline of the body is exercised by an elected council called the Syndical Chamber, in each town possessing a bourse. Members are forbidden to operate on their own account; they are bound to secrecy as to the parties for whom they are acting, unless with their consent, or the nature of the operation justifies a departure from the rule; they cannot refuse to execute orders, nor can they form associations with each other in the exercise of their profession; they are liable for the regularity of the securities they deliver; and they are bound, by a recent decree, to give receipts for the money or securities they receive. Although not legally obliged, *agents de change*, in Paris at least, guarantee in common the liabilities of their members in their professional engagements, and possess a fund for the purpose. They meet at the close of each market and draw up the official price current for the day. The syndical chamber decides, subject to the approval of the Minister of Finance, on the admission of new securities to official quotation. The number of *agents de change* in Paris, not having been increased since 1816, is quite insufficient for the present volume of business, and they have abandoned dealings in coin and bullion and bills of exchange, which they formerly transacted and which properly belong to them. The same cause has led to the rise of an outside market, unauthorised but tolerated, called the Coulisse (*q.v.*) T. L.

CHAPMAN. A person engaged in trade or commerce; a merchant. Up to the Tudor period it is impossible to discover any distinction in the use of the two words chapman and merchant. Chaucer, *e.g.* in the "Man of Lawe's Tale," and in the "Shipman's Tale," uses the two words indifferently. The returns for the poll-tax of 1379 in the West Riding of Yorkshire show that the chapman is on the whole a less important and wealthy person than the man described as a merchant or mercator, but there is nothing in the documents to show that the "marchand de bees," or cattle dealer of Pontefract, who pays a tax of 2s. is in any superior or different position to his fellow townsman who calls himself a "chapman de bees" and also pays 2s. It is not until the great expansion of commerce in the 15th and 16th centuries that the word chapman is definitely restricted to the small pedlar or retail dealer. The transition is markedly seen in the act 5 & 6 Edward VI. c. 21, in which one of the terms used for pedlar is "petty chapman." By the 17th century the distinction between the chapman or small trader or pedlar and the merchant was firmly established. In modern times chapman is only used as an antiquarian or romantic synonym for merchant, or in certain districts as the local name for pedlar.

Besides this signification of seller or merchant, the word was frequently used in the converse sense of purchaser, a usage still to be found in some dialects.

[*Poll-Tax Returns, West Riding Yorkshire*, Archæological and Topographical Association, 1882.—Chaucer (*c.* 1340-1400), *Canterbury Tales.* —Dr. Murray's *New English Dictionary*, 1890.] C. G. C.

CHARGING ORDER. Where a judgment has been entered up in any of the superior courts against a person interested in any government stock, funds, annuities, or stock or shares in any public company, a "charging order" may be obtained from the court by the judgment creditor to the effect that such stock, funds, etc., shall be charged with the payment of the amount for which judgment was recovered. The effect of a charging order is to entitle the judgment creditor to all such remedies as he would have been entitled to if such charge had been made in his favour by the judgment debtor.

[Daniel's *Chancery Practice*, 6th ed. London, 1882.—Wilson's *Judicature Acts.*] J. E. C. M.

CHARITABLE FOUNDATIONS. These may be defined as "gifts to a general public use, which extend to the poor as well as to the rich" (Lord Camden). A charity is said to be constituted by "any legitimate dedication of property upon a trust, whether express or implied, capable of permanent duration for the benefit, whether they be rich or poor, of the public, or a class of the public as distinct from individuals" (29th Report of Charity Commissioners, 1882). To such foundations the state has always stood in a peculiar position. It has, in England, maintained that they required especial care, partly because, like infants and lunatics, they are *inopes consilii*, partly because, owing to their permanence, they are liable to every kind of vicissitude, and partly because those who administer them have not that inducement to good management which self-interest gives in private business. This attitude on the part of the state implies two things, *first*, the duty of protecting, *secondly*, the right of controlling. Both of these are necessary that the foundation may be administered and applied to promote the charitable intent of the founder, or as near as may be; which last proviso has given rise to the doctrine of *cy-près* which is set forth in the celebrated Campden case (Law Report, 18 Ch. Div. 310).

The Court of Appeal here laid it down that it is the duty of the state to review the means which the founder of a charity has prescribed for carrying out the general intention of his foundation, whenever those means, by reason of changes which may take place either in the value of the endowment, in the circumstances of the locality or the population for the benefit of which the charity is administered, in the times, in the habits of society, or in the ideas and practices of men, have become unfitted to secure the end which the founder had in view. This position is illustrated by—(1) trusts for apprenticeship, where the end is to give the objects of the charity such an education as will enable them to gain their livelihood in an honest and respectable manner; and (2) doles, a "practice," says Sir G. Jessel, "which should be more honoured in the breach than in the observance," which may be turned into permanent pensions or used for any method of promoting thrift. These objects were originally carried out by the courts of equity, a method of procedure which proved to be irregular, costly, dilatory, and to give great openings for fraud. The state of things became so little satisfactory that in 1818 a commission was appointed, commonly known as Lord Brougham's Commission, to inquire into the state of the charities of England, and sat, with various changes, until 1837. In 1835 and 1849 committees of the House of Commons were appointed to deal with the results of its labours. Ultimately, in 1853, a permanent charity commission was appointed with a two-fold aim: viz. (1) to supplement the means provided by founders, where those means were inadequate, to give full effect to the purpose of the foundations; (2) to protect the property of charities against waste and loss, and so preserve it for the purpose to which it had been dedicated by the founders. These objects the commissioners have continued to discharge down to the present time. In the year 1870 the work of the endowed schools commissioners was transferred to the charity commissioners, and in 1883 under a special act of parliament (46 & 47 Vict. c. 36) a department was formed to supervise the administration of the city parochial charities. It was hardly to be expected that the powers of the commissioners could be exercised without a considerable amount of friction and of adverse public criticism. The friction has arisen between the central board and the trustees and other local administrators of charitable funds, but the line between the spheres of the two bodies is clearly marked. It is for the local body to administer the charity, *i.e.* its annual income, the duty of the commissioners is to secure its permanence; they and they only are the judges of all applications of its capital, and of the prescribed mode of giving effect to the objects of the charity. It is enough to say of the criticism that it is not uncommonly the result of ignorance, prejudice and disappointed self-interest, or of a strong local feeling which has for a time obscured the judgment. The total number of charities registered by the commissioners was on 31st December 1889, 31,350, and the funds invested in their name amounted to £14,497,836 in 15,511 accounts.

It is quite clear that whatever be their origin or their aim, charitable foundations will have considerable economical effects. (1) They will determine for long periods of time the employment of considerable amounts of property. In the case of real estate the accumulation in the hands of charitable trustees has been limited by the mortmain acts and by the statute 9 Geo. II. c. 36, but with regard to personal property there is no such limit. (2) The effect of foundations on the habits and character of a population may be very great, as will be best seen by some practical instances. In 1793 George Jarvis left a large property, £100,000 in all, for the benefit of the poor of three parishes in Herefordshire, the united population of which did not exceed 900. The consequences are thus sketched by Mr. Hare of the Charity Commission. "The pauper population increased in ten years upwards of 20 per cent; in twenty years almost 40 per cent; and in thirty years 60 per cent. The cottages became more and more crowded, houses not more than sufficient for one family were divided into two or more, other dwellings were built, some on waste, others on remote spots, with regard to little else than mere shelter. The inhabitants of the country round the parishes, who remember their state some years ago, are uniform in their testimony of the demoralisation of which the poor were by this means made the victims: their mode of existence resembled that alternation of want and repletion which is characteristic of the savage state. Idleness, discontent, and improvidence were found to be the fruits of this ill-conceived and ill-judged gift, to which must be added an immorality of life the results of which are yet distinctly felt." Of the endowed charities of Bristol it is said by the Education Commission of 1861, "these charities, by their operation, are teaching indolence, mendicancy, servility, and falsehood to the poor of Bristol." The judgment of the poor law commissioners of 1834 is thus stated. "In some cases, charitable foundations have a quality of evil peculiar to themselves. The majority of them are distributed among the poor inhabitants of particular parishes and towns. The places intended to be favoured by large charities attract therefore an undue proportion of the poorer classes, who, in the hope of trifling benefits to be obtained without labour, often linger on in spots most unfavourable to the exercise of their industry. Poverty is thus not only collected but created in the very neighbourhood where the benevolent

founders have manifestly expected to make it disappear." These reports, and others of the same nature, suggest the question:—How far it is for the good of a country that the characters of thousands should be at the mercy of one man's folly? By some the answer is made, that all endowments for specific purposes are bad, and that if foundations be recognised at all, they should be determined in their object and method wholly by the state. By others, again, a large increase of the power of interference on the part of a public body, a large discretion as to purpose, and a constant living control are urged. How far this last can be attained is at present very doubtful. In 1869, J. S. Mill wrote, "We have well-nigh seen the last of the superstition which allowed a man who owned a piece of land or sum of money 500 years ago, to make a binding disposition, determining what should be done with it as long as time or the British nation should last," but the anticipation must still be reckoned sanguine. (3) Special effects will be produced by foundations having an educational purpose. Adam Smith in a well-known passage has pointed out that endowments to assist those preparing for the clerical calling had attracted large numbers into it, and so damaged the position and prospects of all (*Wealth of Nations*, bk. i. ch. 10). Other writers have urged that teachers require the stimulus of competition, that students are more productive when their self-interest is involved, that scholarships, bursaries, and the like tend to stereotype lines of study long after they have ceased to be profitable, and give them a great advantage in competing with new and perhaps more valuable subjects. But, on the other hand, it is maintained that by endowments only can variety be ensured, that many subjects could not possibly be studied or taught as a means of gaining a livelihood, that education as a whole cannot be safely left to the action of competition.

[Lord Brougham's Commission, 1837.—H. C. Committee, 1835.—H. C. Committee, 1849.—Charity Commission 1854 onwards (especially 1882).—Endowed Schools Commission, 1861.—Lord Hobhouse, *The Dead Hand*, 1880.—Lord Sherbrooke, *Endowment and Free Trade* (answered in *Macmillan's Magazine*), April 1869.—J. S. Mill, "Endowments," *Fortnightly Review*, April 1869.—R. E. Mitcheson, *Charity Commission Acts*, 1887.—Anon., *On the Principles of Charitable Institutions*, 1834. See also Turgot's article "Fondation" in the French *Encyclopédie*.]

L. R. P.

CHARITABLE INSTITUTIONS. Charitable institutions may be classified in various ways. If distinguished according to their objects, they are designed to give (1) permanent help in old age, in almshouses or by pension; (2) permanent help to the incapacitated, in asylums for lunatics, imbeciles, incurables; (3) temporary relief in homes for convalescents, orphans, cripples, inebriates, hospitals for surgical and medical cases, nurseries for children; (4) educational advantages, in schools for the blind, the deaf, and dumb, for children of all classes and all creeds; (5) miscellaneous forms of help, aids to prisoners, homes to penitents, shelter, drugs, etc. The general supervision of all institutions supported by endowments is in the hands of the charity commissioners (see CHARITABLE FOUNDATIONS); the administration is sometimes carried on by trustees, sometimes by representatives of local councils, etc., sometimes by co-opting boards, sometimes, in the case of those supported by subscriptions, by representatives of the subscribers.

The general principle may be laid down that a charitable institution will be useful in proportion as it is an aid and not an obstacle to self-help. But provision for any one of the above mentioned objects on a large scale may check the spirit of provident foresight and thrift. Asylums for the aged may be multiplied to such an extent as to discourage provision for what is an inevitable contingency in life. Many such institutions, again, run the risk of destroying family life, or at least lessening its usefulness. Not only is it difficult to imagine any public institution for children which is not inferior to their home, but the fact is often forgotten that the aged and the young, even the cripple and the bedridden, have their place and use in family life. Parents and children are taught to undervalue their responsibilities when facilities are given for escaping them. Reckless living and early marriage are often encouraged. It is found almost impossible to establish a provident dispensary in the neighbourhood of a great hospital with its free out-patient system. The existence of institutions may also encourage imposture, for to secure their benefits is the aim of the artificial pauper who lives by writing begging letters. Case after case has come to light in recent years in which the benefits of institutions have been the prey of such impostors to the discouragement of every honest and independent man. Again, vice is often fostered by such institutions. The impression is easily created in men's minds that a certain degree of badness is sure to excite compassion, and so the care of children may be evaded or a retreat secured.

These evils can only be avoided by very careful administration, for which two things are needed.

First.—Watchfulness on the part of the managers. Too often boards and trustees are negligent of their business, leave everything to paid officials, and scandals ensue in the management and in allotting the benefits. In many institutions the regulations as to admission are framed with a view to exclusion rather than selection. In some cases admission is gained only by the votes of subscribers—a system which ensures success to those who have influ-

ential friends, and who are therefore in many cases the least in need of help. This system is defended on the ground that subscribers expect a *quid pro quo*, but the experience of institutions which have abandoned it does not justify the argument. Again, watchfulness is needed to avoid waste in salaries, general expenditure, and advertising, and the proportion of income devoted to working expenses often points to the absence of such care.

Secondly.—Elasticity. The objects of an institution may disappear under changed conditions. Almshouses, *e.g.*, which were once the solution of the problem of housing the poor, are now generally condemned. The class for whose benefit the institution was intended may have ceased to exist. Thus in many cities and boroughs are large endowments for the use of freemen, an entirely different class of persons to-day from those for whom they were originally intended. In all such cases careful reform is needed on the lines of attaining a kindred object to that originally proposed, and the wisest founders are those who leave a complete discretion to posterity.

In general terms it may be said that those institutions are the best which provide (1) for the result of temporary disaster — first-rate medical and surgical skill must always be beyond the reach of the poor, and no amount of foresight on their part can guarantee them such professional aid ; (2) for objects which are beyond attainment, owing to the scale on which they are needed, as for instance, large establishments for technical training, libraries, and museums ; (3) for deplorable instances of breakdown in old age, due to no fault of the aged themselves. But even in these cases it is difficult to overrate the importance of careful administration. No action has yet followed the Report of the Royal Commission of 1909.

[For the charitable institutions of England, see Reports of Charity Commission.—*Charities Register and Digest*, by the London Charity Organisation Society (1890).—*Essays on the Principles of Charitable Institutions*, anonymous, 1836.—Reports of Charity Boards, etc., in America are published by the various States.] L. R. P.

CHARITY. "In the minds of all ordinary persons charity implies the relief of poverty." Lord Esher in Court of Appeal Q. B. Law Reports, 22 Q.B.D. 296. But how poverty may be relieved is a question beset with difficulties. *First*, it is almost impossible to avoid weakening the motive to exertion. If a thrifty man finds his thriftless neighbour placed by charity in as good a position as that which he has won for himself by his own industry and self-control, a great discouragement is given to thrift. It is easy to multiply instances of this. Towns with largely endowed charities are almost always full of paupers, and a connection may be traced between the two facts. The vagrant class is created and maintained by thoughtless charity ; the out-patient system in hospitals is fatal to medical clubs ; it is found almost impossible to establish a provident in the neighbourhood of a free dispensary. All experience goes to show that men will not make provision for themselves if they know that they can fall back on others. Charity is too often morally as well as economically harmful. *Secondly*, it is difficult to avoid weakening the family tie—parental and filial responsibility. Thus all provision made by charity for the aged will discourage children from doing their duty, the applicants for almshouses and still more for pensions are always in excess of the vacancies ; foundling hospitals increase the number of illegitimate births and of desertions, whilst their abolition is not found, as was feared, to increase child-murder ; facilities given to parents to get rid of their children, on whatever ground—cruelty, neglect, bad surroundings, etc.—will ensure an increasing number of such cases *Thirdly*, charity, by lowering wages, often inflicts a serious blow on the independent wage-earning class. Persons who are in the receipt of charity are certain, when competing for work, to underbid those who have to live wholly by it ; provision by charity for old age will prevent wages from rising to a point which allows of securing it by the labourer's own efforts ; to transfer employment or to "make work" on charitable grounds is to tax the independent labourer for the benefit of his poorer competitor ; the provision of model-dwellings, etc., by charity at less than cost price attracts crowds of workmen competing for employment. *Lastly*, some miscellaneous evils may be added. Charity often leads to a congestion of population in a favoured district, with all the evil consequences of overcrowding. In country villages the fear of admitting strangers to share in the charities has before now led to intermarriage in a small circle, with disastrous results. Charitable endowments often keep alive useless and sometimes injurious occupations with a view to qualification for their enjoyment,—those which are confined by a religious test become in many cases a premium upon hypocrisy.

The first duty then of those who would relieve poverty without increasing it is that of inquiry into its causes. Poverty may be deserved—the result of non-production from laziness, or reckless consumption, self-indulgence, thriftlessness, etc. ;—or undeserved, being either from general causes—the result of commercial depression, failure of crops, hurricanes, inundations, etc., or from personal misfortune—the result of bodily or mental infirmity. Preliminary inquiry on these points will prevent many of the evils of thoughtless charity. It clears off impostors and prevents charity from being the prey of the idle and dissolute ; it shows that in many cases charity will do no good,

but rather harm, either because the power of recovery is wanting, or because repeated failures show that some such discipline as that of the workhouse is necessary; in other cases it brings to light elements of hopefulness, it shows grounds for thinking that with timely aid independence may be regained. But inquiry does more than this. It not only gives a thorough knowledge of the circumstances of those to be relieved (character, history, opportunities, etc.), but as a result of such knowledge it gives a clue to the best method of relieving. It is to the charitable what diagnosis is to the physician—it shows who can safely be helped and how they can be most helped.

Nothing is more difficult than to formulate methods of charity, *i.e.* of relieving poverty. It may be questioned whether experience has as yet yielded any but negative results, and the constant changes in the conditions of life forbid any hope of finality—thus though the housing of the aged poor has been a problem for centuries, the old solution, viz. the provision of almshouses, is at the present time generally condemned. The following general principles may be laid down—(1) that all charity, to be useful, must be adequate, that is to say it must be sufficient to secure some definite object, or to put the recipient beyond the need of charity. Inadequate charity is worse than useless. The old system of doles illustrated this. People got into debt up to the amount which they anticipated, or not uncommonly wasted the whole in excess. A small sum given to a beggar is just enough to make him go on begging and to give him and others an excuse for doing so. (2) Charity should never be directed to providing the necessaries of life. For those who lack them, viz. the destitute, provision is made by the poor law. Now the poor law embodies in its regulations, etc., the experience of some of the wisest and most skilled in the relief of the poor. It is very dangerous to attempt to relieve destitution without the safeguards which the poor law provides. It is almost as dangerous to attempt to remedy or deal with the ordinary ills of life. Thus sickness and old age are inevitable for all, and it is the duty of all to make provision for them. To relieve people from the responsibility is to weaken self-reliance and self-control, and so in the long run to increase poverty. Charity therefore, when it deals with individuals, should aim at helping those of whom there is good ground for hoping that they may be restored to independence, those whose poverty is inevitable, the blind, dumb, etc., or those who in old age have been defrauded of their savings, or those whose needs are on a scale which is beyond any power of provision—the result of accident or sickness of a kind requiring special knowledge and skill in treatment. (3) The wisest charity is that which does not wait till poverty is a *fait accompli* to relieve it, but aims at removing its causes. In individual cases this work is moral rather than economical, it aims at the formation of character by personal friendship, moral suasion, the creation of opportunities, friendly guidance. Material assistance will be best employed in improving the general conditions of life, and that form of charity is least open to objection, under present circumstances, which does not come into direct contact with individuals at all, but seeks to provide on a large scale the conditions of good living, open spaces, museums, picture galleries, etc., the requisites of culture, bodily and mental.

Any such scheme of charity is clearly beyond the power of the individual to realise; both for inquiry and administration some organisation is needed. The question arises whether this should be the work of the state or left to voluntary bodies. Precedents may be found for almost every possible combination of the two systems. In England the spheres of the state and private charity are distinct. The state undertakes the relief of destitution, leaving poverty to voluntary effort.

[Reports of Charity Commissioners (1833 *seq.*).—Publications of Charity Organisation Society London.—Defoe, *Giving Alms ... no Charity.*—Walker, *The Original.*—For foreign countries: Twining's *Poor Relief in Foreign Countries*, also Senior, 1835, and blue book, 1875-77.—Report, Royal Commission on Poor Laws and Relief of Distress, 1909.] L. R. P.

CHARITY ORGANISATION. Charity organisation is an application of the principle of division of labour to the relief of poverty, with the further object of giving the assistance required by the poor in the manner most beneficial to them, while leading the more prosperous to understand that it is their duty to join in meeting the wants of those in distress. With a limited area and a small population the problems of charity are, by comparison, simple, for the well-to-do know their poorer neighbours, and the conditions under which they live, and so can help them personally. All this is changed in a city with a dense population, a wide separation between rich and poor, a complex social system in which the causes of poverty and its remedies are hard to see; here some organisation among the charitable is needed to ensure greater knowledge, and greater efficiency as a result of knowledge. The knowledge requisite is of two kinds: first, to guarantee that charity is bestowed on fitting objects, and secondly, that it is given in the most useful form. Such knowledge is only to be gained by thorough inquiry, and its value may be shown by examples of the evils caused by ignorant almsgiving. (1) In every community in which charity abounds there will grow up a class of persons who live by it in preference to living by independent work. The

existence and growth of such a class is often the result of ignorance on the part of charitable persons who, whilst striving to mitigate the evils of poverty, increase them by fostering mendicancy, hypocrisy, idleness, and improvidence. In proportion as the charitable act together in some organisation they will avoid creating these mischiefs, for diligent inquiry will prevent the diversion of alms to such recipients. (2) Unless there is some common action among the charitable there is danger of overlapping. Some persons will be assisted by three or four institutions and half a dozen individuals at one and the same time. This danger is greatest when charity is distributed on several different principles, as in England, where we have municipal and parochial charities, charities for members of various religious bodies, trades, and professions, charities for persons suffering from various forms of mental and bodily disease, and the like. Here ignorance of what others are doing causes waste.

It was these evils, amongst others, which the late Edward Denison had in his mind when, in 1869, he gave the impetus which started the London Charity Organisation Society. He desired to establish a union of charities having a registration office in each parish and a central office auditing and controlling the parochial charities. It was to be an organisation of existing charities with a view of checking imposture and waste, and of teaching sound principles in almsgiving; it was not to add another to the sources of help, but to increase the efficiency of those already in existence by their co-ordination. As a result, we have now in London a central committee with district committees in every poor-law union. The central committee does not relieve directly, but aims at propagating sound views on the subject of charity by publication and discussion, promoting co-operation, suggesting new institutions on good principles, collecting information relating to individuals and of general import, and preventing misapplication. The district committees in London, and the sixty-eight affiliated societies in England and Scotland, not only organise, but also administer relief on certain principles. Those principles may be summed up as follows: (1) That all relief should aim at making the recipient independent of relief. (2) That no relief should be given without thorough inquiry and investigation. Quite apart from the detection of impostors mentioned above, inquiry is to the charitable worker what diagnosis is to the physician. Nothing short of thorough knowledge can ensure the discovery of the best means of helping; only thus can we see the germs of hopefulness which it is for charity to develop—the grounds for thinking that restoration to independence is possible. Knowledge of the past is necessary as a guide to the future. In the best societies the term "deserving," as implying that charity should be given on a test of merit in the past, has been dropped. (3) That existing institutions should be utilised as far as possible. Thus a person may be referred to medical or general institutions, to private persons co-operating with the society, to relations or friends; he may also be helped by finding employment, by loan, or a grant from the society's funds. (4) That all relief should be adequate to secure the object with which it is given. If on the one hand organisation prevents overlapping, on the other it secures co-operation—it can bring a number of persons together, and by joint effort do what individuals acting separately cannot. By putting these principles into practice the various societies train workers, promote discussion, and spread knowledge.

The administration of charity in England is bound up with the existence of a poor law (see POOR LAW), and one of the aims of charity organisation is to establish relations with the official forms of relief. It is the duty of the poor-law authorities to relieve destitution, and in administering relief to take into account the amount of destitution and that only. But even among the destitute there are many cases which can be treated far better by the assistance of the charitable than by the poor law,—all those cases, that is, which give ground for hope that independence may be restored. Charity can ensure more thorough inquiry and knowledge; it can induce relations and friends not legally liable to give substantial help; the help which it gives directly is far more elastic, determined by future possibilities rather than by existing needs. Above all, charity can give moral assistance. In many cases, *e.g.* widows left with large families, the poor require not so much material help, as the encouragement and support which sympathy brings (an American society takes as its motto "not alms, but a friend")—these, together with opportunities for work, openings for children, and the like, can be given by charitable volunteers working together, but they are beyond the scope of an official system. It may be said shortly that in many cases charity can restore independence more quickly, more cheaply, with a smaller risk to family affection and self-respect, than the poor law, whilst at the same time it enforces social duties and binds classes together.

The relations between voluntary and state help differ in different countries. In France, the right to relief is recognised only in the cases of lunatics and deserted children, all other relief may be described as organised charity distributed by public bodies. Institutions, such as *Hôpitaux* for the sick, hospices for the aged and infirm, are supported by endowments and voluntary contributions, and managed by unpaid bodies constituted and controlled by the state. The Bureaux de Bienfaisance, consist

ing of elected and nominated members, the Maire presiding *ex officio*, distribute relief in the communes to the poor at their own homes. The funds which they administer are derived almost wholly from endowments and voluntary contributions, a small proportion only coming from taxation. Inquiry is conducted mainly by sisters of charity, and is very thorough. It is claimed for the French system that it combines the efficiency of voluntary effort with the regularity and consistency of official management; it is objected to it that in practice the relief given is rarely adequate. The value of inquiry is illustrated by the case of Elberfeld in North Germany. Here the prevalence of pauperism induced the authorities to enlist volunteer aid very largely. Relief is now administered by 18 overseers and 252 visitors, to each of whom is entrusted on the average 4 cases; as a result, pauperism of all kinds has largely diminished, able-bodied pauperism has disappeared, thrift and providence have greatly increased.

The difficulties in the way of extending organised charity in the United Kingdom lie first in the absence of strictly binding principles. The reports of the various societies show a great variety both of principle and practice. It is with the greatest difficulty that even the local government board, with its statutory limitations and its official machinery of inspection and audit, can secure even an approach to uniformity in administering poor relief; it would be far more difficult to do so with voluntary, uncontrolled, irresponsible bodies. Secondly, granting a general acceptance of principles, and loyalty to them, a difficulty arises from the scarcity of individuals with the skill and experience necessary to apply them. Charity organisation makes way but slowly in the United Kingdom. Charitable persons and the governors of institutions are unwilling to submit themselves to its discipline, and misinterpret its objects and methods; and yet the best hope for improving the relief of the poor lies in supplementing the poor law by voluntary and organised effort.

[Malthus, *Principle of Population*, bk. iv. ch. x.—Edward Denison, *Letters*.—Charity Organisation Society, Annual Reports and Publications.—Moggridge, *Handbook for Helpers*.—Emminghaus, *Das Armenwesen in Europäischen Staaten* (1870).—Eastwick, *Poor Relief in Different Parts of Europe* (1873).—Aschrott, *Das Armenwesen Englands* (Eng. trans. contains much information as to relations of Poor Law and Charity).—Twining, *Poor Relief in Foreign Countries and Out-door Relief in England* (1889).—C. S. Loch, *Charity Organisation*.—L. Béquet, *Régime et Législation de l'assistance publique et privée en France* (1885).

L. R. P.

CHARITY, STATE. A distinction may be drawn between the supply of the necessaries of life, of the minimum, *i.e.* of food, clothing, and shelter needful to support it, and the supply of sources of comfort over and above these, which technically fall under the head of luxuries, in short, between the relief of destitution and of poverty. The action of the state with regard to the former is determined in this country by the Poor Law (see POOR LAW), we are now concerned with proposals that the state should supply or guarantee certain of the latter. Such action on the part of the state may be conveniently summed up under the head of state charity. The growth of such a theory of the duty or functions of the state is not difficult to trace. The poor-law system guarantees to every citizen the necessaries of life, but the conception of these necessaries is constantly changing. As Ricardo has pointed out, it differs in different countries, and at different times in the same country. In popular parlance the term "necessaries of life" implies a great deal more in this country to-day than it did a hundred years ago. And, as the conception has grown, so, not unnaturally, the state has come to be regarded in some quarters as responsible for all the individual things which are contained in the new conception.

We must distinguish, *in limine*, two kinds of provision made by the state. There are, first, services common to the nation as a whole, which are open to all alike, and of which all avail themselves, of which it is difficult to say that any individual or any class is more benefited by them than any other; as, for instance, the administration of justice, the guarantee of security at home and abroad, the enforcement of contracts, the means of communication, the medium of exchange. There are, also, advantages accruing to certain individuals or certain classes only, which practically are given by one part of the community to another; such at the present time in England would be free education; it would be provided by one section or class for the use and enjoyment of another, whereas in the United States, it is said, the whole population, without distinction, send their children to the common schools. Free libraries might come under either head; picture-galleries under the first; and baths and wash-houses under the second only. Again, a distinction must be drawn between England, where there is a poor law, *i.e.* provision for the destitute, and countries where there is none. The poor-law system in England is practically the outcome of a drastic reform of a system of state charity which was working untold ill, and many of the proposals of modern times, *e.g.* free dinners, may be treated, and indeed would naturally be treated, as part of the poor-law system, and administered under the safeguards which are embodied in that system as the result of a bitter experience. On the other hand, the attitude of a country towards such a question as Government

Insurance may be determined by the presence or absence of a poor law, the arguments pro and con will be of a different kind in the two cases, and even the same arguments will have very different weight.

A few instances will show the nature of state charity. I. *Allotments.* All through history we find pressure put upon the state to "find land" for the poorer citizens. At the present time proposals of this kind are common, as, by 50 & 51 Vict. c. 48, the local authority is empowered to purchase land, by compulsory sale if need be, for the purpose of allotments (see ALLOTMENT). Now when the powers granted by this act have been put in force, the question arises as to the terms on which such allotments shall be let, whether at the market value (*a*) as agricultural, or (*b*) as building land, or at any of the thousand-and-one varieties of "fair rent." If they are let at anything under the market rent they come at once under the head of state charity. For the rates then provide for certain citizens advantages which they cannot command for themselves, or, at least, the advantage secured to them from the rates is out of all proportion to their contribution. The question of right—how far, *e.g.*, in country parishes the allotments represent a repair of wrong done by enclosure acts—is outside the economical question which refers to the probable effect of a course of conduct. Now, if a piece of land be let to a labourer at less than its market value, he clearly is benefited to the extent of the difference, in other words, his wages are increased out of the rates. The results of such policy, on a large scale, may be seen in the well-known allowance system. In the long run wages will be lowered by almost exactly the amount of advantage given; in other words, the employer of labour will profit by the fact that a part of his wages bill is paid for him by the whole body of ratepayers. Again, if the experience of the past may be trusted, the results to the labourers themselves will be disastrous (see ALLOWANCE SYSTEM). A practical difficulty arises from the fact that it is almost impossible to ensure that the letting of allotments on easy terms shall not be an engine of political corruption. As it is, the promise to procure cheap allotments is fast becoming a favourite device to catch votes at a parliamentary election. In considering this question we must bear in mind that if an open space be acquired out of the rates and let in allotments at its market-value, no charity is involved. The advantage to the ratepayers of an open space may fairly be set off against the difference of value for agricultural and building purposes, and the opportunity given for open-air exercise, etc., is clear gain to the community. II. *Buildings.* A form of state charity which finds many supporters at the present day is the provision of houses, or sites of houses, for the working classes, by the state. The question involved here is twofold, viz.: (*a*) how far is such action on the whole for the good of the community, and (*b*) how far is it likely to achieve its immediate end. That end, it must be confessed, is most attractive. The moral and economical loss to the nation involved by the conditions under which the poor live—bad air, bad materials, confined space, want of sun, and the consequent habits of ill-health and intemperance—cannot well be overstated. But it must always be borne in mind (1) that an attempt to improve dwellings which is not the result of a rise in the standard of comfort on the part of the occupants is not likely to have a lasting success, though it may foster such a rise; (2) that a supply of houses at less than the market value will not only have the same results as a supply of allotments, but also will attract workmen from other districts, and even other countries, who will increase the pressure upon accommodation; (3) that it is very difficult to confine the benefits of such a system to the class for whom it is intended, with the result, if a different class enjoy them, of increased pressure in other quarters. All these considerations, coupled with the actual experience of success on the part of various joint-stock enterprises, point to the provision of dwellings as a matter which may well be left outside the sphere of state-action. III. Three forms of state charity are so closely connected that they may be considered together. (*a*) *Free Schools.*—Comparatively few writers have maintained that elementary education should be left to private enterprise, and it is probably undertaken or organised by the state in every civilised country. But much controversy has arisen on the point whether it should be given free of charge. On the one hand it is said that if the poor are deprived of their children's earnings by the compulsory system, it is right that at least they should have them taught for nothing; and again that educational endowments have been in very many cases monopolised by the rich, who may fairly make compensation by paying for the education of the poor. With these arguments the economist is not concerned. It is also said to be well worth while, inasmuch as education diminishes crime and pauperism—a statement vigorously denied by some writers, as by Mr. Herbert Spencer; or again, because it increases the efficiency of a nation's labour, by assuring the general education which is a necessary preliminary to a technical one, and, lastly, because it raises a nation's moral tone indirectly if not directly; in short that education is so necessary a condition of civic life, in any real sense, that it cannot be left to the option or power of a parent to provide it. All these arguments, it will be noted, presuppose that education cannot be general or compulsory unless it is free. (*b*) *Free Libraries.*

—Free schools carry with them free libraries, that is to say, if it be worth while to give elementary education, it is also worth while to give the necessary complement, without which the educated youth is turned loose with his mental appetite sharpened and nowhere to graze. No complaint is more common in the country districts than that the effects of elementary education disappear in a few years. It is also argued that the amount of good done is out of all proportion to the cost. It is a striking case, says Prof. Jevons, "of the principle of multiplication of utility." Thus the cost of each issue from the Birmingham Free Library is under twopence. Economically, too, there is a direct advantage. The supply of wholesome literature not only cheers and brightens a workman's life, making him a better producer, but it also helps him to special knowledge. At a free library he learns where his labour is in demand, and so the mobility of labour is increased. He learns also the lessons of history, gets a wider horizon of knowledge, and greater familiarity with the points at issue in trade disputes, etc. (*c*) *Free Dinners.*—Free schools are said also by some to carry free dinners with them. It is useless, and even cruel, it is urged, to force children into school who cannot profit by instruction for want of nourishment, and it is beyond question that in large towns numbers of children come in that condition every day. Now it is the duty of the state to provide the conditions of mental development, of which teaching is only one, and therefore in such cases as the above it is argued that it should provide dinners as in other cases it provides desks. The objections to the provision of education, libraries, and dinners by the state are up to a certain point common to all three. Thus we may say that so far as experience and history are any guide, the only motive which can be trusted to work generally and constantly in making men industrious is self-interest, *i.e.* the desire for necessaries and luxuries. Anything which weakens this motive by supplying the results of industry without its exercise helps to increase the idle class in the community—the least profitable and probably the least happy of all—and so to decrease the amount of production. Again, any measures which guarantee the means of supporting children will, in the long run, diminish providence in the matter of marriage and increase population; in other words, the evils it is sought to cure will grow greater and not less. Now both the training and feeding of children, it is argued, are matters for which persons should make provision, or should see their way to supplying before they marry; and it is unwise to enable them to dispense with such provision. The general contention that free schools weaken or diminish the sense of parental responsibility is met by two special arguments. First, by pointing out that the bulk of the expense of a child's schooling is already borne by other than its parents, and always must be. Subscribers, endowments, voluntary or compulsory rates contribute by far the larger part of the cost of carrying on a school. Consequently free schools present a question of degree rather than of kind. This argument applies only to the special circumstances of England. Secondly, by denying the truth of the statement. In such matters disproof is not easy. We may trace a connection between a motive and a fact, or *vice versâ*, as between the absence of outdoor relief and the strength of family affection in Ireland, but it is hardly possible to demonstrate more than this. It is said, however, that in the United States the strongest sense of responsibility goes hand in hand with free schools, the parents straining every nerve to provide for their children a secondary education, the primary being found for them by the state. Again it may be questioned whether educational endowments have had any such result as the weakening of responsibility on the part of middle-class parents, who, in the main, enjoy them. So again with regard to free libraries. The existence of these is not found to diminish men's zeal for the possession of books; on the contrary, the business of booksellers increases in towns where they are opened. The existence of a state-supported library in the British Museum, or endowed libraries as those of Oxford and Cambridge, is not found to have any bad effect on those who use them. There is no difference in principle between supplying at the public cost rare books and any other—rareness is wholly relative. Libraries stand on the same footing as picture galleries, the provision of which is a recognised function of the state. As to free dinners it may be said, whilst in all countries the provision of education is a state matter, and is never kept wholly to individual effort, etc., the provision of meals is a family or domestic matter. The difference between the two is one of principle, and the supply of food should never be undertaken by the state, except in cases of destitution, when it falls within the province of the poor law. Further, an inquiry conducted in 1889 by the Charity Organisation Society showed that the evil to be met by free dinners was of such small dimensions as to call for no exceptional measures, and that where exceptional measures had been adopted the evil had greatly increased.

The sphere of state action, including state charity, is rarely if ever determined by logical considerations: it is more often the result of historical events. When we ask ourselves the abstract question, how far will the state do more good than harm, or *vice versâ*, by the provision of necessaries or comforts, experience gives no certain answer. The conditions of the problem vary with each succeeding generation and in each country. The answer will depend largely

on a balance of probabilities. How far will industry and thrift be weakened, family life threatened, and human feeling deadened, by state charity? How far, again, is improvement made possible, a higher standard conceived, by the provision of certain conditions of realising an end in life? (For PENSIONS, OLD AGE, see Appendix to Vol. III.) L. R. P.

CHARTER. A written document by which the crown, in virtue of its prerogative, confers special privileges on an individual, or group of individuals. The term was at one time applied to conveyances of land, and to measures adopted by the crown by way of legislation. In modern times, the crown's assent to the formation of a corporation, such as a university, a city, a bank, or a trading company, is frequently given by charter. Trading corporations are usually formed under the companies acts, but where these are not applicable, a charter of the crown has sometimes been obtained. The North Borneo Company was incorporated in this way in 1881 (see charter in *London Gazette*, 8th Nov. 1881, pp. 5448-5453). In the charter of this company, it is expressly declared that the grant is not to authorise the setting up of any monopoly of trade, and is to be subject only to customs duties imposed for revenue purposes, and to restrictions on importation similar to those existing in the United Kingdom. Formerly, it was thought that foreign trade could be best promoted by conferring a monopoly of trading with certain countries, and various companies were incorporated by charter with this object. The chief companies so formed were the East India Company, 1600; the South Sea Company, 1711; the African Company, 1618; the Russia Company, 1553; the Eastland Company, 1579, and the Turkey Company, 1593. (See AFRICAN COMPANIES, EARLY.)

[Chitty, in his *Commercial Law*, vol. i. p. 661, gives a concise account of these companies. Adam Smith in *Wealth of Nations*, bk. v. ch. i. discusses the economic effects of such monopolies. The right of the crown to grant a trading monopoly depends on the 21 Jac. I. c. 3, and is discussed in Broom's *Constitutional Law*, 1886, p. 239.] J. E. C. M.

CHARTER PARTY. A document embodying a contract by which a ship or part of a ship is let to a merchant for the conveyance of goods on a determined voyage to one or more places. The instrument expresses the freight to be paid, the tonnage, the nature of the cargo, and other particulars. The merchant usually covenants to load and unload within a specified time, or if he delay the ship for a longer time, to pay a fixed daily sum, which is called demurrage. It frequently happens that the option of a number of ports is given to the consignee (the person to whom the ship is addressed), a certain port or several ports being named in which the master of the ship is to call for orders. E. S.

CHARTISM. The chartist movement was in its origin and its aim economic. It arose out of the economic necessities of the time, and its leaders had before them, as their ultimate object, social and industrial amelioration. To understand fully this aspect of chartism we must study the movement in its two phases: (1) from 1836 to 1839; (2) from 1840 to 1848.

(1) 1836 to 1839. Three circumstances may be regarded as bringing about the chartist movement: the commercial and industrial distress immediately preceding it in time; the introduction of machinery with its effects; and the new poor law of 1834. Various men were of course variously affected by these causes; but their common action was secured by the predominant influence of one man, and the action of another, supported as he was by his colleagues. The influence referred to was that of Robert Owen, who had preached the gospel of optimism and social regeneration when all around seemed overshadowed with a gloomy present and a threatening future, and, further, urged on his followers and all with whom he came in contact, the need of education and moral elevation. It was, however, the action of Lord John Russell that brought into united action bodies so diverse in aim and constitution as the working men's association of London, the Birmingham political union, and the unions of the north, these latter being under the guidance of Feargus O'Connor. Briefly described, the first was educational and moderate, the second unstable, partly desirous of bringing about the adoption of Mr. Attwood's currency scheme, and partly anxious for general industrial amelioration, while the latter formed centres for violent denunciation of the rise of machinery, and of the application of the new poor laws. All, however, hoped to attain their ends by bringing pressure to bear on parliament, itself to be rendered more amenable by a further extension of the franchise; and hence Lord John Russell's declaration against all further reform united them together and led to the formation of the national convention. The task to which this body devoted itself was mainly political, and to attain its object recourse was had first to menaces and then to open revolt. The former were disregarded and the latter was suppressed. Meantime, however, in the northern unions an almost socialistic attitude had been taken by some of the leaders. Throughout the entire movement, indeed, there had been symptoms that many were thinking of and aiming at an entire social reconstruction.

(2) 1840 to 1848. The second phase of chartism differed essentially from the first. It was of smaller account in every way but one. Its strength was less, its adherents fewer, its organisation less stable; but the views of its leaders were much more advanced. In theory, Bronterre O'Brien stood far ahead of any other. He was

socialistic in his aims, but, unlike some of his associates, he did not confuse socialism and industrial retrogression. His schemes were, it is true, somewhat immature, but he may be described as feeling about for a new social organisation. Feargus O'Connor, on the other hand, was neither so consistent nor so advanced in his aims. Thus at one time he was advocating the claims of the "National Charter Association," for so the organisation of the chartists was called, while at another, in defiance of the advice of his associates, he advocated a new scheme for bringing the people into connection with the land. In opposing the Anti-Corn Law League, it should be noticed, however, that he based his antagonism on the need which he alleged to exist of general social reconstruction (see especially speech, 5th August 1844). But the direct effect of the agitation at this period was small. Discussions among the leaders and mutual accusations "of interested motives" diminished their following, and it was to little or no purpose that O'Connor sought to win them back by his apparent advocacy of their interests in a periodical called *Labour*, or by his national land scheme. The latter, as a matter of fact, was financially unsound. The movement failed. That the leaders were really in earnest in their agitation is probable from the circumstances which have been alluded to, as also from their decided refusal to form any alliance with the middle class, or capitalist, reformers of Birmingham.

In its two phases, then, chartism was of economic importance. During the earlier period it aimed at economic regeneration; during the second, it not only aimed at this, but assumed a socialistic character.

[*Historical Review*, October 1889.—Gammage, *History of the Chartist Movement*.—Place, *MSS.*—*Northern Star* and other papers.] E. C. K. G.

CHARTISM. THE POINTS OF THE CHARTER. The Charter itself was a document in the form of an act of parliament, drafted by Francis Place from materials supplied by William Lovett. Its proposals were always summed up under six heads or "points," viz. Universal, *i.e.* adult male, Suffrage, the Ballot, Annual Parliaments, Payment of Members, Equal Electoral Districts, and Abolition of Property Qualification. No one of these proposals was in any sense new, and the great majority of them had been continuously agitated for more than fifty years. The Duke of Richmond introduced a proposal for adult suffrage and equal electoral districts into the House of Lords in 1780. All or nearly all the charter "points" were adopted by the Society of the Friends of the People, and the Corresponding Society in the earlier years of the French Revolution, and by that Edinburgh Convention for taking part in which Muir and Palmer were sentenced in 1793. The "points" were generally spoken of as the Duke of Richmond's, or Sir Francis Burdett's, or Major Cartwright's "plan of radical reform," and were undisguisedly intended by all their working class supporters to be used for bringing about economic as well as political equality. During the ten years following the French war every period of high prices and low wages produced a fierce agitation for "radical reform" in the manufacturing districts and sometimes also in London. In 1830-32 the "plan" was for a time given up in favour of the Reform Bill, but in London amendments in favour of universal suffrage were carried at the public meetings held in support of Lord Grey's bill. These were generally moved by members of the "Rotunda Gang," or National Union of the Working Classes, many of whom had been personal disciples of Robert Owen. The reformers of 1790-1820 had advocated Tom Paine's proposal of a graduated income tax, or had been followers of "Spence's plan" of land municipalisation. These men went further, and were strongly though vaguely socialistic in tone. Place describes them as "filled with bitter notions of animosity against everybody who did not concur in the absurd notions they entertained, that everything which was produced belonged to those who by their labour produced it, and ought to be shared among them; that there ought to be no accumulation of capital in the hands of any one to enable him to employ others as labourers, and thus by becoming a *master* make slaves of others under the name of workmen, to take from them the produce of their labour, to maintain themselves in idleness and luxury while their slaves were ground down to the earth or left to starve. They denounced every one who dissented from these notions as a *political economist* under which appellation was included the notion of a bitter foe to the working classes — enemies who deserved no mercy at their hands."

Place also gives a good specimen of their teaching in a song published about this time—

"Wages should form the price of goods,
Yes, wages should be all;
Then we who work to make the goods
Should justly have them all.
But, if the price be made of rent,
Tithes, taxes, profits all,
Then we who work to make the goods
Shall have—just none at all."

From among these men came Lovett, Cleave, Hetherington, and others who were afterwards leaders of the Chartist movement. It is significant that their organisation was called successively the "British Association for Co-operative Knowledge" (*i.e.* of Robert Owen's principles) in 1829; "The Metropolitan Trades Union" in 1830, when one of their declared objects was to "enhance the value of labour by diminishing the hours of employment," and "The National Union of the Working Classes," for nominally political purposes, in 1831.

After the complete failure of the chartist movement in 1848, working-class reformers generally returned to the work of co-operation and trade-unionism, so that the economic side of the agitation which carried the Reform Bills of 1867 and 1884 was not so apparent as the political side. But the bill of 1867 was opposed on economic grounds by Robert Lowe (afterwards Lord Sherbrooke), Lord Shaftesbury, and others. Lord Shaftesbury on that occasion said:—"I am sure that a large proportion of the working classes have a deep and solemn conviction—and I have found it among working people of religious views—that property is not distributed as property ought to be; that some checks ought to be kept on the accumulation of property in single hands; that to take away, by a legislative enactment, that which is in excess, with a view to bestow it on those who have insufficient means, is not a breach of any law, human or divine."

[Authorities as above, and William Lovett's *Autobiography*.—Bamford's *Life of a Radical*.—*The Annual Register*, and Hansard's *Parliamentary Debates*.—Scribner's *Century Magazine*, January 1882.] G. W.

CHASTELLUX, François Jean, Marquis de, born at Paris 1734, died 1788. By profession a soldier, he was received, 1755, into the *Académie française*, a distinction which he owed to the success of his principal work, *De la félicité publique ou considérations sur le sort des hommes dans les différentes époques de l'histoire* (1st ed. 1772, 2 vols. in 8vo; 2d ed. 1776, 2 vols. in 8vo; 3d ed. 1822, 2 vols. in 8vo, with notes by Voltaire). This work, if out of date in form, is yet full of ideas which would do no discredit to a book of our own times. In particular he discussed the question of the population a quarter of a century earlier than Malthus, and from the same point of view as that distinguished economist. A. C. F.

CHATTEL or Chattel Personal. Any movable thing which can be part of a person's property. The expression "chattels real" is applied to interests in land granted for a fixed number of years, as, for instance, leasehold interests. Chattels real are thus classed with ordinary chattels (with which they have otherwise nothing in common), because after the death of an intestate owner the devolution is in both cases the same, while the descent of immovable freehold property is regulated in a different manner. This somewhat anomalous and artificial distinction may soon disappear and the expression "chattels real" will then, no doubt, become obsolete. E. S.

CHECKS on Population. According to the theory of Malthus (*q.v.*), population invariably increases when the means of subsistence increase unless prevented by some *powerful and obvious checks*. These checks, and the checks which repress the superior power of population and keep its effects on a level with the means of subsistence, are all resolvable into moral restraint, vice, and misery. These checks are classified as preventive and positive; by the former the birth-rate is diminished, by the latter the death-rate is increased. Personally Malthus was the strongest supporter of moral restraint as exemplified in late and provident marriages, and he makes no mention even of those physical checks with which, in the present day, his name is often associated (*e.g.* by the late Mr. Bradlaugh).

[Malthus, *Essay on Population*.—Doubleday's *True Theory of Population*, London, 1846.—Bonar, *Malthus and his Work*.] J. S. N.

CHEQUES, Law of. The law relating to cheques is now mainly contained in §§ 73 to 82 of the Bills of Exchange Act 1882 (45 & 46 Vict. c. 61), which codifies the law relating to bills, notes, and cheques. A cheque may be described as an order by a customer to his banker to pay on demand a given sum of money to, or to the order of, a specified person, or to bearer. Its strict legal definition is contained in § 73 of the act, and is as follows: "A cheque is a bill of exchange drawn on a banker payable on demand." The section then goes on to enact that, subject to the special rules contained in §§ 74 to 82, the provisions of the act applicable to bills payable on demand shall apply to cheques. It follows from this enactment that the paying banker is not bound to verify the indorsements on a cheque (§ 60), though he pays at his own risk if the drawer's signature be forged; that a cheque is not entitled to days of grace (§ 14); that the expenses of noting a dishonoured cheque are recoverable (§ 57); and that notice of dishonour must be given to the drawer and indorsers unless excused under § 50 of the Act. A cheque should be stamped with a twopenny stamp in the same manner as any other bill payable on demand.

When a banker opens an account with a customer the relationship between them is that of debtor and creditor, with a superadded obligation on the part of the banker to honour his customer's cheques as long as there is sufficient money to his credit to meet them. The right to overdraw only arises from special agreement. A banker's authority to pay his customer's cheques may be determined by countermand of payment, by notice of the customer's death, or that he has committed an actual act of bankruptcy, or by the fact that a receiving order has been made against him. If a banker wrongfully dishonours his customer's cheque, he is liable to the customer in an action for damages, and it has been said that the smaller the cheque the greater the wrong, inasmuch as it implies a greater reflection on the customer's credit. The holder of a cheque which is wrongfully dishonoured has no remedy against the banker, for there is no privity of contract

between them, and a cheque, being a bill of exchange, does not, according to English law, operate as an assignment of the funds in the banker's hands, even though it be drawn for the exact amount of the customer's balance (see, however, § 53 as to Scotland).

Though a cheque is an instrument intended for prompt presentment, the drawer, in case of delay, is not relieved from his obligation to the holder unless he suffers actual damage through the delay, as, for instance, through the failure of the bank on which the cheque was drawn. In such case the drawer is discharged to the extent that he has been damnified, but the holder is allowed to take the drawer's place in proving against the bank (§ 74).

Crossed Cheques. The practice of crossing cheques first received legislative recognition by the statute 19 & 20 Vict. c. 25. This act was amended by the 21 & 22 Vict. c. 79, in consequence of a decision to the effect that the crossing was not an integral part of the cheque. In a case decided in 1875 it was held that if a crossed cheque was stolen and got into the hands of a *bona fide* holder, the true owner had no remedy, even though the cheque was paid in contravention of the crossing directions. To meet this defect the Crossed Cheques Act 1876 was passed, which introduced the "not negotiable" crossing. These enactments are now repealed, and §§ 75 to 82 of the Bills of Exchange Act take their place.

A cheque may be crossed either generally or specially. A general crossing makes it payable only when presented through a bank, but any bank will do. A special crossing names the bank by which the cheque must be presented. A cheque may be crossed either by the drawer or by the holder, and the holder may convert a general crossing into a special crossing. When a cheque is crossed specially the banker to whom it is crossed may again cross it specially to another banker for collection, but a cheque must not otherwise bear two crossings. A collecting banker is also allowed to cross to himself an uncrossed or generally crossed cheque. If a crossed cheque be paid contrary to the directions of the crossing, the paying banker is liable to the true owner for any loss he may sustain thereby. A cheque which is crossed either generally or specially may further be crossed with the words "not negotiable." These words are a little misleading. They do not mean that the cheque is no longer transferable. The cheque may be transferred as before, but the person who takes it with these words on it does not obtain, and is not capable of giving, any better title to the cheque than that which the person from whom he took it had. A cheque so crossed is very much on the same footing as an overdue bill of exchange. Suppose a cheque payable to bearer and crossed "not negotiable" is stolen. The thief gets a tradesman to cash it for him, and the tradesman passes the cheque through his bank and gets it paid. The paying and collecting banks would incur no liability if they obeyed the directions of the crossing, but the tradesman would be liable to refund the money to the true owner; or again, assuming payment of the cheque to have been stopped, he could not sue the drawer. For further information as to cheques, see the headings Bill of Exchange; Clearing System; Dividend Warrant.

M. D. C.

CHERBULIEZ, Antoine Élysée, born at Geneva 1797, died at Zurich 1869. Originally a barrister, then a magistrate, he replaced Rossi, 1833, at the academy of Geneva as professor of law (*droit*), and, 1835, as professor of political economy. His first works were political, as he was a member of the legislature of the canton from 1831 to 1846, then of the representative council, and finally of the general assembly and great council up to 1848. His political works are *Théorie des garanties constitutionnelles* (2 vols. in 8vo, 1839); *Études sur la loi électorale de 1831* (in 8vo, 1840); finally, *De la Démocratie en Suisse* (2 vols. in 8vo, 1845). But it was especially as an economist that he made his mark, and his works on this branch of study are much valued. By 1840 he published *Riche ou Pauvre, exposition succincte des causes et des effets de la distribution actuelle des richesses sociales* (in 8vo). Then after 1848, the date when he fixed himself in France, *Le socialisme c'est la barbarie*, an examination of the social questions raised by the revolution of 24th February 1848 (in 8vo, 1848). *Simples notions de l'ordre social*, for the use of every one (in 18mo, 1848). *Le potage à la tortue*, popular conversations on social questions (in 18mo, 1849). Finally *Étude sur les causes de la misère tant morale que physique*, and on the means of remedying them (1 vol. in 8vo, 1853). He was a very active member of the Political Economy Society. He returned to Switzerland at the time of the *coup d'état* of 1851, and was immediately appointed to the chair of political economy at Zurich at the polytechnic federal school of Switzerland. It was while thus engaged (in 1862) that Cherbuliez wrote his most important work—*Précis de la science économique et de ses principales applications* (2 vols. in 8vo); the value of which was recognised by the institute of France, and led to his election as a corresponding member. Cherbuliez also assisted in the preparation of the *Bibliothèque universelle de Genève* in which, and in the *Journal des Économistes*, he wrote numerous articles.

A. C. f.

CHEVAGE. The use of this word in mediæval documents is a little vague, and in consequence the exact sense in which it is employed is not always clear. Bracton, at page 48 of vol. i., describes chevage as a fixed payment to the lord made at fixed times by "nativi" or

bondmen who are engaged in trade, or as soldiers, or who, from any other reason, have ceased to reside on the lord's manor; this payment is "made as a sign of subjection," and "so long as the bondmen pay chevage they are said to be in the power of the lord, nor is his power destroyed," even though they cease to reside on the manor. Britton, bk. i. c. 32, gives a slightly different account but does not define chevage. He says "that in order that the lord may retain his power over his bondmen, it is only necessary that he be in possession of their services, so that he may take services from their holdings, and from those who hold no land in villenage may take a penny a year of 'chefage' and a day's work in harvest time, or other little or great service according to their ability." It is clear from this passage that chevage was a payment made by a man of villein status, who was for some reason not in the ordinary position of a villein, and that it was made either in return for the privilege of being allowed to reside off the manor, or merely as a recognition of the fact that, although he had no holding in the manor like other villeins, he was nevertheless one of the lord's bondmen. An instance of the first kind of chevage can be found in the account of the manor of Ansty for the year 2 & 3 Henry IV., which is printed at page 521 of Cunningham's *Growth of English History and Commerce*, ed. 1890. The amount paid for licence to leave the manor for a time is one shilling in one case, and sixpence in another. But in many manorial accounts an entry can be found of the chevage of a whole manor, and it is probable that if this meant a payment for leave to remain off the manor, the name of the person making the payment would have been given. It is not possible to speak definitely on the point. Britton clearly suggests the existence of a class of villeins outside the land organisation of the manor, and, from a comparison of his account with Bracton's, it would appear that the class of villeins not included in the manor as landholders grew up in the time which elapsed between the two writers. (See VILLANUS.)

In the court rolls of some manors the word occurs in yet another sense. Strictly speaking all the villein tenants of a manor were bound to appear at the manorial court to assist in the decision of the matters discussed there. But in some manors a kind of representative system was in use, under which each tithing or group of tenants was represented at the court by its chief man; and for this privilege of attending the manor court by deputy a payment at the opening of each court was made to the lord; to which the name of chevage is sometimes given.

For instance in the court roll of the manor of Hemingford printed at page 88 of Prof. Maitland's *Select Pleas of Manorial Courts*, the persons who attend the court give as chevage 13s. 4d. Other instances of this payment are given in the same book. The poll-tax paid by the Jews before their expulsion from England was sometimes also called chevage.

[Bracton, *De Legibus Angliæ* (Rolls Series, 1878).—Britton, edited by F. M. Nicholls, 1865. —*Select Pleas in Manorial Courts*, vol. i. edited by F. M. Maitland (Selden Society), 1888.—*Growth of English Industry and Commerce*, Cunningham, 1890.] C. G. C.

CHEVALIER, MICHEL, born at Limoges 1806, died at the Château de Montplaisir near Lodève (Hérault) 1879. Having distinguished himself at the polytechnic school, he commenced life in the *département du nord* as a mining engineer, a post which he gave up in 1829 to join SAINT-SIMONISM (*q.v.*) His style, the brilliancy of which was early recognised, won for him the position of editor-in-chief of the *Globe*, the organ of that school of socialism of which he rapidly became one of the most active and influential members. Faithful, through the troubles which ensued, to the Saint-Simonian faith, he was condemned, 28th August 1832, to a year's imprisonment and one hundred francs (£4) fine, as the responsible agent of the *Globe*, in which articles appeared which were accused of being outrages on public morality. His intentions were worthy, and his habits of life more strict than appearances would have led the world to suppose; hence the government itself, which discovered at this time M. Chevalier's abilities, remitted half the penalty, and also entrusted to him the mission of studying the railways of the United States. It is enough to say of the labours of our economist in this direction that in a memoir entitled the *Système de la Méditerranée* (1832, in 8vo), he foresaw with rare intelligence the future of these new methods of communication. He sent from America to the *Journal des Débats*, which had taken him on its staff even while he was in prison, articles which, published in two volumes, furnish a collection of the highest value, even after the lapse of fifty years — the *Lettres sur l'Amérique du nord* (2 vols. in 8vo, 1836). He commenced also at this date to write in the *Revue des Deux Mondes*. Soon after his return from America he published, as the result of his mission, the *Histoire et Description des voies de communication aux États-Unis et des Travaux qui en dépendent* (1840, 2 vols. in 4to), with an atlas in folio.

His pen, from this date, was able to render all the subjects which it treated interesting; but his judgment, especially on its economic side, only formed itself into shape gradually. The successive stages through which he passed are all the more obvious in his writings, as with a rare sincerity, he never sought to cloak them from view. A volume in 18mo, *Des Intérêts matériels en France*,—on public works, roads, canals, railways,—appeared in 1838, bringing

into one series those articles of his which had appeared before on these different subjects. M. Chevalier intended to have completed this volume, which put forward a kind of economic programme, by adding to it two other parts; credit institutions and those which supply professional education. This idea, unfortunately, was never realised. Devoted to peace, he opposed, in a pamphlet addressed to M. Molé, the fortifications of Paris. He replaced, 1841, Rossi at the Collège de France in the chair of political economy. The lectures of the two first years, taken down in shorthand by one of his pupils, Michel Broët, form the material of two volumes in 8vo, which appeared in 1842 and 1844 (1st ed.), and in 1855 and 1856 (2d ed.) One can see, by reading each volume alternatively in the first and the second editions, what the modifications were which the judgment of the author passed through, gradually and almost unconsciously, as the years of his professional work went by.

Thus, to quote only one example, freedom of competition at first inspired him with alarm, and caused him to advocate reservations, the necessity of which he no longer felt in 1855 and 1856. We may add that in 1850 a third volume of his lectures appeared, of which a second edition was published in 1866. The subject was *La Monnaie;* the work is full of technical details of the highest interest, and written with a masterly hand. In 1845 he was elected a deputy by the department of l'Aveyron; but his resolute acceptance of the principle of free trade hindered him from being re-elected the next year.

The Revolution of 1848, which Chevalier submitted to rather than joined, found him none the less disposed to combat courageously, step by step, the socialistic errors which triumphed at the Luxembourg in the *Commission du gouvernement pour les travailleurs*, presided over by Louis Blanc. He wrote at that time in the *Journal des Débats* a series of letters called *Lettres sur l'organisation du travail*, which, collected under this title, form a stout volume in 18mo. This and the *Lettres sur l'Amérique du nord*, may be considered as the most characteristic and remarkable works of this author. The result of the appearance of these letters, written off-hand, and under the pressure of the events which were happening around him, was a decree from the government suspending him from lecturing at the Collège de France. The *Assemblée constituante* annulled this decree the December following, and Michel Chevalier was able to return to his chair.

The Institut (*Académie des Sciences morales et politiques*) opened its doors to him February 1851. At the end of that year he gave in his adhesion to the government of the *Coup d'état*, following in this rather his judgment than his inclination. He believed liberty to be more in peril under the class of parliamentary government of which he had seen the working, than under a personal government. Called to the council of state February 1852, he had to ask for a substitute to give in his stead his course of lectures at the Collège de France. It was M. Henri Baudrillart who undertook this duty for him. At the same date M. Chevalier published the *Examen du système commercial connu sous le nom de système protecteur* (in 8vo.), a work in which protectionism was demolished completely, and the advantage of commercial liberty shown.

Immediately after this he rendered the last-named cause a service of a very different character. Holding as he did the same opinions as Richard Cobden, whom he presented in 1859 to the emperor, he induced Napoleon III. to sign the famous commercial treaty with England of 23d January 1860, which was the precursor of the French treaty of 1861 with Belgium, of 1862 with the Zollverein, of 1863 with Italy, of 1864 with Switzerland, of 1865 with Sweden and Norway, the free cities of Bremen, Lubeck, and Hamburg, and the grand-duchies of Mecklenburg-Schwerin, Strelitz, and Holland, of 1866 with Portugal, then with Austria, and finally of 1866 with the pontifical states. These treaties introduced, so to say, free trade into the public international law of Europe. But this system is at the present time destroyed in France, where protectionism has struck its roots afresh, and causes all consumers to pay toll for the advantage of the privileged producers.

In 1859 Michel Chevalier published a new volume with the significant title, *De la baisse probable de l'or* (in 8vo). It was translated into English by Cobden in the same year. Facts, as is well known, have shown he was wrong in his opinion on this point.

He strove later against Louis Wolowski in favour of the single standard (gold, this time) against the system of a double standard combined with a fixed ratio. The question of the banks became also in his hands the occasion for a vigorous contest. Wolowski strove for the unity of banks, Michel Chevalier for their duality (1864). He resumed his duties as professor in 1866, and carried them on till 1878, when he took afresh a coadjutor, this time one of his sons-in-law, M. Paul Leroy-Beaulieu, who was destined, after his death, to become his successor.

A strong supporter of exhibitions, especially of universal exhibitions, he wrote a brilliant introduction, in 8vo, to the reports of several juries of the magnificent industrial and international *fête* which took place at Paris in 1867.

This economist, though his natural predilections for the less rigid side of economic science were too strongly marked, is justly reckoned

on account of his strictly scientific exactness, his brilliant style, and the depth of his views, among the highest of his class in France. His pen was most fertile, but we have only thought it needful to enumerate above his chief works.

A. C. f.

CHICKERING, Jesse, M.D., born in New Hampshire 1797; entered the Unitarian ministry, then practised medicine, and died in West Roxbury, Massachusetts, 1855. He was interested in statistical inquiries and published *A Statistical View of the Population of Massachusetts, from 1765 to 1840*, Boston, 1846, pp. 160;—*Immigration into the United States*, Boston, 1848, pp. 94, in which he questions whether too much encouragement has not been given to immigration to the United States; and also *Comparative View of the Population of Boston in 1850, with the Births, Marriages, and Deaths, in 1849 and 1850*, Boston, 1851, pp. 7-58. D. R. D.

CHIEF RENT. See Rent-Charge.

CHILD, Sir Josiah (born 1630, died 1699), the chairman, and virtually the ruler, of the East India Company for some years. He aimed at aggrandising the Company by extending its political power, and restraining competition with its trade. Several anonymous writings in defence of the Company are attributed to Child. Under the sobriquet φιλοπάτρις (*sic*) (1681) he maintains that "the clamours, aspersions, and objections made against the present East India Company are sinister, selfish, or groundless." While contending that "the trade of the East Indies cannot be carried on to a national advantage in any other way than by a joint stock," he enumerates many enlightened principles, as that "silver and gold, coined or uncoined, though they are used as a measure of all other things, are no less a commodity than wine, oil, tobacco, cloth, or stuff, and may in many cases be exported as much to national advantage as any other commodity. That no nation ever was or will be considerable in trade that prohibits the export of bullion." In the *Humble Answer of the Governor . . .* to a *Paper of Propositions for Regulation of the East India Company . . .* (Somers's *Collection of Tracts*, vol. iii.), "the great monopolist," as Macaulay says, "took his stand on the principle of free trade."

Similar antinomies, as they appear to our age, are noticeable in Child's principal work, the *Discourse upon Trade*. He asserts the principle of competition, the law of market, thus unequivocally: "They that can give the best price for a commodity shall never fail to have it, by one means or another, notwithstanding the opposition of any laws, or interposition of any power by sea or land; of such force, subtlety, and violence is the general course of trade" (chap. viii.) Yet the panacea, the "unum magnum," which is recommended is a legalised rate of interest. Child admits, with regard to the navigation laws, that unrestricted commerce might be best "if the present profit of the generality be barely and singly considered"; but holds that "profit and power ought joyntly to be considered" (chap. iv.) (This was also his contention.) He considers that the doctrine of the balance of trade does not apply to the trade with East India, "both in point of strength and warlike provisions, in regard of shipping and saltpetre, but [and] also in respect of the furtherance it gives to many other trades," by means of which England regains more specie than the company exports (chap. ix.) But the trade with Venice in "currance purchased with our ready money" is to be discouraged. "Concerning plantations" (chap. x.), Child argues, in a manner worthy of Malthus, that the colonies have not caused the depopulation of the kingdom. It is a more disputable proposition that "most nations in the civilised parts of the world are more or less rich or poor proportionable to the paucity or plenty of their people." Equally instructive is Child's scheme for the relief and employment of the poor (chap. ii.) There is a spirited criticism of this scheme in Eden's *State of the Poor*.

The first draft of this work was published in 1668. The original title appears to have been *Brief Observations Concerning Trade and Interest of Money* (British Museum Library $\frac{1029.b.1}{2}$). This tract was reissued in a later edition, together with a preface and ten additional chapters; the whole work being designated by the title *The New Discourse of Trade*.

[Macaulay's *History of England*, vol. iv.—R. Grant's *Sketch of the History of the East India Company*.—Macpherson's *History of Commerce*, vol. ii.] F. Y. E.

CHILDREN'S LABOUR (Factory Acts). Few records exist anterior to the rise of the factory system which throw light upon the conditions attending the labour of children. Lord Macaulay (*History of England*, ch. iii.), states that in the 17th century, the practice of setting children to work prematurely existed "to an extent which, when compared with the extent of the manufacturing system, seems almost incredible. At Norwich, the chief seat of the clothing trade, a little creature of six years old was thought fit to labour." In 1677, a Worcestershire ironmaster, Andrew Yarranton, published a pamphlet entitled "England's Improvement by Land and Sea," in which the schools then existing "in all the towns of Germany," for the purpose of training girls in the art of spinning linen, are described Children of six years old and upwards were, sometimes to the number of two hundred in a single room, systematically employed in this industry, producing large quantities of excellent yarn. The writer urged that efforts should be made to follow the German plan in England, especially in the counties of Warwick, Leicester,

Northampton and Oxford. His advice was, however, not adopted. About the beginning of the 17th century the manufacture of lace by machinery was introduced into this country by refugees from the Continent. In Bedfordshire and Buckinghamshire, schools were established for teaching the art to young children (Felkin's *History of Machine-Wrought Hosiery and Lace Manufactures*, 1867). But throughout the greater part of that century the manufacture of textile fabrics was mainly a domestic industry, and the children of the household were compelled to labour long and hard. Dr. Cooke Taylor (*Silk, Cotton, and Woollen Manufacture*) holds that the system of overworking children "was at its worst and greatest height long before anybody thought of a factory." Probably the most comprehensive account of the employment of juvenile labour in productive industry before the rise of the factory system is to be found in Mr. R. Whateley Cooke Taylor's *Introduction to a History of the Factory System*.

The latter half of the 18th century witnessed a number of remarkable inventions, each of which aided in the establishment and spread of that highly organised method of industry known as the factory system. The discovery of the spinning machine, of the mechanical loom, of the steam engine, of the cotton gin, of the calico-printing machine, and of coal gas for illuminating purposes, successively tended to the aggregation of workpeople in textile manufactories. They aided too in that separation of processes, known as the "division of labour," which opened the way for an extensive employment of children in the lighter and simpler processes calling rather for dexterity than strength. But it was not alone in the textile manufactures that this conversion of domestic into factory industry was going on. It gradually spread into other productive departments. Unquestionably, however, it was in the textile occupations that the growing employment of infantile labour, and the abuses accompanying it, first drew public attention to the necessity of factory legislation. In Lancashire and Derbyshire the rapid increase of the cotton manufacture created a great demand for labour, and the population grew faster than the means of decent habitation. There was consequently much overcrowding, and the mills themselves were unhealthy, whilst the labour was long and exhausting. Large numbers of pauper children were brought from southern parishes, where the local authorities were glad to get rid of them, and the accommodation provided for these young and overworked immigrants was very defective. The result was a serious epidemic disease, which at the close of that century wrought great havoc amongst the factory population, and especially amongst the children. In 1802, therefore, the first factory act (the Health and Morals Act) was passed. However, beyond ordaining some sanitary regulations of a general kind, the act did not apply to others besides the apprenticed children, drawn chiefly, as already stated, from distant portions of the country. Children of families living near the factories were still subject to oppressive treatment, their parents being as a rule regardless of their health. The need of further interference being demonstrated by an inquiry conducted by parliament in 1815-1816, a second act was passed in 1819, but its operation was confined to cotton mills. No child might begin to work under nine years old, and between that limit and sixteen years the hours of labour were not to exceed twelve per day, and night work was prohibited. The next act, that of 1825, restricted the labour of children to nine hours per day, and these were not to extend beyond five o'clock in the morning and half-past four in the afternoon. Still further, meal hours were carefully defined, and employers were, for the first time, compelled to keep a register of the children working for them. Then came the early days of the trade unions, which were marked by much violence, the issue of which was the Act of 1st and 2d William IV. c. 39, consolidating and improving previous factory acts, but without affecting very seriously the status of children. Later on, however, Lord Althorp's Act of 1833 defined the ages at which boys and girls might be allowed to work in factories as that of nine years. Between that age and thirteen years children were to work only nine hours, and were to attend school during two hours. Thus the "half time" system was introduced, which was improved in 1844 by Sir Robert Peel's act. That measure provided that children of eight (no longer nine) years of age and up to thirteen might be employed for six and a half hours only, and three days' attendance at school per week was required. Afterwards protective legislation for children was further improved and extended by the Factory Extension Act, and the Workshop Regulation Act. (1878 (Consolidation) Factory and Workshop Act.) Not only textile and other factories in which large numbers of workpeople are employed, but also small industrial establishments, were brought under governmental control. The regulations of the Workshops Act were placed under the control of local authorities. The intention was to ascertain by experiment how far local control might prove equal or superior to central administration. Practically the act was ignored by the local authorities, and further legislation was deemed necessary. This has tended rather in the direction of extending the protection of the law to children in various occupations not coming within the factory system, than of increasing the restrictions upon the employment of youthful labour. The act (1889) for the prevention of cruelty to children gave to those employed in theatrical and other entertainments

the benefit of the factory acts. That of 1904 forbade children to sing, perform, or offer things for sale in any public place without a licence, licences being only granted to children over 10 and under stringent conditions. It forbids, as did the Children's Dangerous Performances Act, 1879 (amended 1897), the training of children under 16 as acrobats or for any dangerous performance. The act 1908 made the punishments for misdemeanours under these headings still more severe. Similar legislation has been gradually adopted in foreign countries. In France, the desire to protect young children from exhausting labour has taken practical shape in recent enactments. In the United States labour is regulated by the several state legislatures. There has been in recent years a steady tendency in several states, stimulated by the reports of the various "bureaus of statistics of labour," to provide for the protection of children. [See CHILDREN'S EMPLOYMENT, App.] E. H.

CHIMINAGE. Among the special revenues arising from the exceptional position of forest land was a toll on traffic known as chiminage (FORESTS, MEDIÆVAL). The law naming those from whom such toll could be taken, and its amount, is to be found in the Charter of the Forest, 9 Henry III. § 14. The special mention of this toll suggests that it had been made an excuse for unreasonable exaction before the issue of the charter. Under the law so settled no forester is allowed to take chiminage unless he holds his office in fee by the payment of a rent for it; no persons but those who come into the forest to buy brushwood, timber, or charcoal to sell again are to be liable to pay the toll; and all other travellers and even those who came to fetch away brushwood on their own backs without the use of beasts or carts were to pass free. The amount of the toll was fixed at twopence for each cart for each half-year, and one halfpenny for each horse. The toll so limited seems to have formed no grievance, and its amount is usually unimportant. For instance in Sherwood forest in the 15th century the chiminage is farmed out at 6s. 8d. a year. The word is sometimes used for any toll paid for passing along a road.

[Manwood's *Forest Law* (4th ed.), 1717.—*Records of the Borough of Nottingham*, vol. ii., 1883.—Dr. Murray's *New English Dictionary*, *s.v.*, 1889.] C. G. C.

CHITTI, LUIGI, by birth an Italian, passed the greatest part of his life abroad; this explains how he came to write his books always in French. In 1833 he published a *Cours d'économie politique* and in 1839 at Brussels, a pamphlet—*Des crises financières et de la réforme du Système Monétaire.* He had occasion to observe a very severe monetary crisis in Belgium, the origin of which he assigns to excessive emissions of paper money. He proposes the gradual abolition of metallic money, substituting paper money for it, which, if only not superabundant, cannot become depreciated, a doctrine which is clearly taken from Ricardo's *Reply to Mr. Bosanquet.* Chitti proves himself to be well versed in questions of capital, credit, money, exchange, but is no original thinker.

M. P.

CHOROGRAM. "A chorogram is the result when different aggregates are indicated by surfaces, showing the size of each, and portions of the surface are coloured or shaded differently to indicate the result of the enumeration in each aggregate. It can be profitably employed to show the different degrees of the occurrence of a single phenomenon in different aggregates."

[*Annals of the American Academy*, Supplement May 1891, "The History, Theory, and Technique of Statistics," by A. Meitzen.]

(See GRAPHICAL METHOD.)

CHOSES IN ACTION. The term applied by early lawyers to rights of action.

Choses in action were not at common law assignable except in the case of bills of exchange and other negotiable instruments which by the custom of merchants were assignable by indorsement and delivery of the bills. In the reign of Henry VIII. it was held that a chose in action might be assigned as satisfaction for a debt, the assignee to sue if necessary in the assignor's name. Afterwards by various statutes promissory notes, bills of lading, and life and sea policies of assurance were made assignable, but it was not until the 36 & 37 Vict. c. 66, § 25 (6), that it was provided generally that a legal chose in action may be assigned. The assignment must be in writing, and notice of the assignment has to be given to the person liable to pay the debt.

A right of action conferred by a suit in equity was always assignable in equity.

[*Principles of the Law of Personal Property*, by J. Williams, London, 1887.] J. E. C. M.

CHOSES IN POSSESSION. Movable tangible property, as opposed to rights of action which are called *choses in action.* Property of this nature could not at common law be held by estates though settlements were always enforced in equity. As compared with real property, choses in possession descend to the administrator or executor, and not to the heir, but title deeds, heirlooms, fixtures and chattels vegetable are exceptions to the rule, as they partake of the nature of real property.

[Williams's *Personal Property*, London, 1887.] J. E. C. M.

CHREMATISTIC (or MONEY-MAKING). The *locus classicus* on chrematistic is in the *Politics* of Aristotle, bk. i. ch. viii.-xi. The passage is somewhat obscure, from the nice distinctions dwelt on; but the general purport is that there are two sorts of chrematistic—one natural and necessary, being the art of acquiring the material resources to be placed at the disposal of, and

used by, the higher art of economic, of which this kind of chrematistic is the handmaid, whilst the other sort is devoted to the unlimited pursuit of gain for its own sake, without relation to the real wants of the household or the community. The word is now usually applied to systems of theoretical or practical economy which overlook the higher ends of society, and exclude from consideration questions of moral obligation and political well-being (see ARISTOTLE).

J. K. I.

CHRISTIAN SOCIALISM is a name which properly belongs to the propagation of co-operative production or working men's associations by F. D. Maurice and his disciples in the years 1849 to 1853. For its use merely as a name for socialism inspired by Christian motives see SOCIALISM. Its origin is to be found in a letter from J. M. Ludlow to Maurice (March 1848) saying that the socialism of Paris workmen was a real power which would shake Christianity if it were not Christianised. After the publication of Henry Mayhew's letters on the London poor in the *Morning Chronicle*, in 1849, Maurice and his followers at Lincoln's Inn, who had already been trying to persuade the Chartists, in *Politics for the People* (6th May to 29th July 1848), and in discussions at the Cranbourne Tavern, that moral and sanitary reform were of much more importance than extension of the suffrage, turned their attention to economic questions. They were led to deny any beneficence to the operation of self-interest. "Free competition," said Ludlow, "mars everywhere, instead of making, the wisest distribution of labour" (*Christian Socialism*, p. 35). "We have protested," Maurice wrote to Dr. Jelf, 12th November 1851, "against the spirit of competition and rivalry precisely because we believe it is leading to anarchy, and must destroy at last the property of the rich as well as the existence of the poor" (*Life*, ch. ii. p. 83). As a remedy they proposed "Christian Socialism," or friendly association for productive purposes. They sometimes went so far as to imagine a state of things in which all producers might "combine regularly into one body which should, after mutual explanations and by mutual concert, fix the terms upon which each member should dispose of his wares to the others" (Ludlow, *Christian Socialism*, p. 35); but they suggested no principle of distribution on which this agreement should be based. They founded an association of tailors (February 1850) of which Walter Cooper, formerly a Chartist, was manager, and organised a society for promoting working men's associations under a council of promoters among whom were Maurice, Charles Kingsley, T. Hughes, E. V. Neale, and F. J. Furnivall. *Alton Locke*, which represents the ethical side of the Christian Socialist doctrine, was published early in 1850, and was followed by *Tracts on Christian Socialism*, *Tracts by Christian Socialists*, and the *Christian Socialist*, a weekly penny paper which lasted from 2d November 1850 to the end of 1851. Its place was then taken by the *Journal of Association*, which endured till 28th June 1852. The evidence of the "Promoters" before Slaney's Committee of the House of Commons on "Investments for the savings of the middle and working classes" in 1850, aided in bringing about the legalisation of co-operative societies by the "Industrial and Provident Partnerships Act" of 1852. After the passing of that Act the society for promoting associations was remodelled and the term "Christian Socialism," as employed in this connection, was abandoned. It was offensive alike to theologians, economists, and socialists. The hostility displayed towards the Christian Socialists in many quarters was more due to the name they assumed, and to the vehemence with which Kingsley denounced competition, than to dislike of their Associations, though these were doubtless looked on with some suspicion as copies from French models (see CO-OPERATION. For recent history see SOCIALISM, Appendix to Vol. III.).

[F. Maurice, *Life of Frederick Denison Maurice*, 2 vols., 2d. ed., 1884.—T. Hughes, Prefatory Memoir in the Eversley ed. of *Alton Locke*, 2 vols., 1881.—L. Brentano, *Die christlich-soziale Bewegung in England*, 2 Aufl., Leipzig, 1883, containing bibliography, pp. 75-78.—J. M. Ludlow, *Christian Socialism and its Opponents*, 1851.—Abp. Benson, *Fishers of Men*, 1894.—Dr. E. W. Donald, *The Expansion of Religion*, 1896.—Bp. Chas. Gore, The *Mission of the Church*, 1892.] E.C.

CHRISTIANITY AND ECONOMICS

Church, the Mediæval, Economic Influence of, p. 280; Roman Catholic School of Economics, p. 283; Influence of Protestant Thought on Economic Opinion and Practice, p. 285.

CHURCH, THE MEDIÆVAL, ECONOMIC INFLUENCE OF. The following article is not concerned with the origin of church property or the title by which it is held—subjects which belong rather to the historian or the jurist than to the economist;—it is limited to two points: the influence of the church upon social ranks, and the influence, chiefly in England, of churchmen and ecclesiastical bodies, as landowners, upon agriculture.

1. If it be true that the mediæval church was always the great leveller, that the clerical order was the one profession in which it was possible for a man of the humblest birth to attain to the highest position, this was less by virtue of express enactment than in consequence of the facts, (*a*) that the church remained free from the distinctions of classes that grew up in the civil state, and (*b*) that the churchman, as the rule of celibacy became universally accepted in Latin Christendom, could be raised to any rank without the drawback of his founding a family of nobles. The possibility of rising was, it is true, not confined to churchmen: but that

which was the exception among the laity was common among the clergy; and in one important point, with respect to slavery, the exemption of the clerical status from the classes of civil society produced a remarkable relaxation of class conditions.

It was not, however, for many centuries that it became the accepted doctrine that an ordained person was *ipso facto* a free man. At first the only question that arose was that, when a slave was ordained or received into a monastery, his lord was robbed of his service. Accordingly, by a number of ordinances contained in the civil law (*Cod.* i. tit. iii. 37; *Novell.* v. 2, cxxiii. 35), and reinforced by ecclesiastical decrees which became incorporated in the canon law, it was repeatedly laid down that no bishop should ordain a slave without the consent of his lord. The rule was not merely intended to protect the lord's rights: it was found also that slaves guilty of crime availed themselves of the refuge afforded by holy orders or admission to a monastery to escape punishment; and churchmen on their side—St. Leo the Great is a prominent instance—objected to the clerical profession being "defiled by the baseness of association" with slaves (*Can. apost.* lxxxi. (cp. *Conc. Chalced.* A.D. 451, can. iv.); Leo I. *Epist.* iv. 1).

If, however, in the fifth century it could be conceived as possible that a man might be a clergyman and yet a slave, this idea early gave way before another which presumed that if a slave were ordained with the knowledge of his lord, and without any objection raised by him, he was a free man, though not formally manumitted. It was still, however, conceded that supposing the lord were not aware of the act, he had a right to claim his slave within the space of a year: and that ordination did not for a long time involve of itself emancipation is shown by the enactments in the civil law, that, supposing an ordained slave returns to secular pursuits, his lord may claim him; and that it was lawful to ordain a bondman bound to the soil on his lord's land even without his lord's consent, so long as he continued to fulfil his servile duties (*Novell.* cxxiii. 17). This latter rule was soon modified by the provision that the ordained person might perform his services by a deputy (*Novell.*, l.c.; cp. gloss. in *Cod.* i. tit. iii. 37)—an arrangement which was accepted by ecclesiastical authority; but on this side it was maintained that in no case could a man in priest's orders be claimed back as a slave (Gelas. I., *epistt.* in *Decr. Grat.*, dist. liv. 9-11).

So far, therefore, it appears that it was the lord's assent, express or implicit, which made the clerk free; that, failing such assent, the lord was compensated by substituted service; and that a distinction made itself felt between priest's orders and the inferior degrees which admitted a very large and heterogeneous company of ordained persons to ecclesiastical privileges. It was unquestionably the admission of slaves to the lower orders which led to the gravest abuses; and the prohibition of the ordination of slaves without their lord's consent, which is repeated through Frankish times, (Karol. Magn. *Admon. gen.* (a. 789), cap. lvii. (cp. cap. xxiii.); Hludow. Pii, *Capit. eccl.* (a. 818-819), cap. vi.), and of which a famous instance occurs in the sixteenth constitution of Clarendon (*Const. Clar.* xvi., cp. Stubbs, *Sel. Charters* (ed. 5, 1884), p. 137; *Assis. Clar.* xx.[1]), was directed principally against this practice. Not merely were the lord's rights infringed, but persons of suspicious character were able to remove themselves from the ordinary jurisdiction of the country. In spite, however, of positive enactments, the view that a priest was necessarily free became extended to the diaconate and the inferior orders; and the petition of the commons in 1391 that the villeins might not be allowed to send their sons to school in order to raise them by holy orders (*qe null neif ou vileyn met ses enfantz de cy en avant a escoles pur eux avancer par clergie*) (*Rot. Parl.* iii. 294, cp. Rogers, *Hist. of Agric. and Prices* (1866), i. 78, 93) may be taken as proof that by that time the result was established.

With reference to the influence of the church upon slavery outside its own body, there can be little doubt that the humaner principles of jurisprudence by which, at least in England, it was guided were favourable to the bondman (cp. Theodor, *Penit.* xiii. 3; Egbert, *Penit.* Addit. 35). Alike in Francia and in England ordinances were passed moderating the abuses of the slave-trade (Freeman, *Norm. Conq.* i. (ed. 3, 1877) 335 *seq.*, 435), and in these the hand of the churchmen is hardly doubtful. Still more striking is the public action of St. Wulfstan, bishop of Worcester, to whose arguments and those of Lanfranc was attributed the express prohibition by William the Conqueror of the export of slaves (Stubbs, *Sel. Charters*, p. 85; Will. Malmesb. *Gestt. Regg.* iii. 269; cp. Freeman, iv. (ed. 2, 1876) 380 *seq.*), a prohibition which was extended by St. Anselm in 1102 to any sale into slavery whatever (Eadmer, *Hist. Nov.*, a. 1102; cp. Freeman, v. (1876) 223 *seq.*) The emancipation of slaves was from an early time recognised as a religious act, and the practice of including such a deed in testamentary dispositions was manifestly promoted by clerical persuasion. If religious corporations were not specially forward in manumitting their own bondmen, it was rather because the law of the church was precise against diminishing their property, than through any reluctance to increase the body of freemen. But the process by

[1] Garnier de Pont-Sainte-Maxence's attack upon the constitution (*St. Thomas le Martyr*, lines 2488-2490 ed Hippeau, 1859) rests rather on *a priori* grounds.

which the bondman rose through the ambiguous rank of the villein to that of the copyholder is traceable to known economical causes and only in isolated cases to ecclesiastical influence.

2. Lands in the possession of a church were distinguished from other real property in so far as they were protected against alienation, and enjoyed certain immunities from the payment of taxes.

(*a*) According to the civil law, church lands could not as a rule be alienated, though they might be exchanged between two religious corporations or mortgaged up to a limited amount (*Novell.* cxx.) They could only be alienated by an act performed in the presence of the metropolitan and of two bishops of the vicinity (*Novell.* xlvi. 1, lxvii. 4). Except as subject to some such condition, alienation was totally forbidden by the early councils (*Cod. Canon. Eccl. Afric.* xxvi., xxxiii.), and by the later canon law it was not permitted *sine iusta causa*, that is without evident necessity or advantage (6 *Decr.* iii. tit. ix. 1). But the power which was reserved of granting leases of land not brought into cultivation made it possible to frustrate the intention of the accepted rule. Setting on one side the numerous cases of alleged unlawful appropriation of church lands by the civil ruler, cases in which there is often reason to suspect exaggeration in the record of the misdoing (cp. Freeman, ii. (ed. 3, 1877) 554-567), we find abundant instances in the Domesday Book and elsewhere, of church lands being granted not merely for life but for several—commonly three—lives (see examples, in Freeman, v. 778-785), at the expiration of which it was not always easy for the grantor to resume possession. By degrees it was attempted to restrict the practice, and the canon law as laid down by Clement V. prohibited all grants for life or even a term of years, allowing them only "ad modicum tempus" (*Clement.* iii. tit. iv. 1), an ambiguous phrase which was afterwards restricted by Paul II. to three years (*Extrav. comm.* iii. tit. iv.)

(*b*) Among the earliest grants of land to churches or monasteries, in England there are examples in which it appears that the lands in question were entirely freed from the common burthens of property (Bed. *Vit. S. Bened.* vi., *Epist. ad Ecgberct*, xii.); but soon, as such grants were multiplied, it became a matter of public policy to subject them to the *trinoda necessitas*. With regard, however, to the other payments to which land was liable, the usage varied; sometimes the land was wholly enfranchised, sometimes only in part; sometimes it bought its enfranchisement by payment at the time of the grant or by a surrender of lands in lieu of future obligations (Lingard, *Hist. and Antiq. of the Anglo-Saxon Church* (1845), i. 240-250). Gradually the rule was established that lands held by a church or religious house were held in "free alms" (*libera eleemosyna*), or FRANK-ALMOIGN (*q.v.*), a form of tenure which is found in Domesday as not exclusively ecclesiastical (Freeman, vol. v. p. 804, *seq.*), and which is legally understood to involve exemption from all temporal dues (Digby, *Introd. to the Hist. of the Law of Real Property* (ed. 3), p. 38; Bracton, iv. 28 f. 207; Ellis, *Gen. Introd. to Domesday* (1833), vol. i. p. 258 *seq.*) On the other hand the liberty thus implied in the possession of lands by the church did not extend to all lands held by the church, nor was it at first admitted by all statesmen. The latter point is sufficiently illustrated by the notorious policy of Randolph Flambard; and as to the former, it is clear that the recognised obligation of the *trinoda necessitas* might naturally be construed in the light of feudal ideas as carrying with it the obligation to feudal military service. That this was in fact the case is shown by the way in which Archbishop Lanfranc—to name no other instance—compounded for the services due from the convent of Christ Church, Canterbury, by maintaining a certain number of knights (*Epistt. Cantuar.* ccxliii.; cp. Freeman, v. p. 372); and when in 1159 the imposition of SCUTAGE (*q.v.*) was carried out, it was levied also upon church lands (cp. Joh. Saresb. epist. cxlv.) But from the reign of Henry II. onwards, the payment of taxes directly levied on church lands was repeatedly resisted as an infringement of ecclesiastical immunities (cp. Stubbs, *Const. Hist. of Engl.* (ed. 1880), i. 647 *seq.*, ii. 187 *seqq.*, etc.); and it was to prevent a fraudulent multiplication of lands for which such immunities could be claimed that Edward I., in 1279, enacted the statute of Mortmain (*Stat. de Vir. Relig.*, ap. Stubbs, *Sel. Charters*, p. 458 *seq.*]

The lands held by a religious house, at least those in its immediate vicinity, were as a rule cultivated by the brotherhood itself, and the personal interest thus devoted to the work produced better results than the enforced labour of bondmen. The evidence of the Domesday survey goes to show that the church lands were in a higher state of cultivation than other property. The monks also employed themselves in clearing forests, draining marshes, and making roads and bridges (cp. Lingard, i. 267 *seq.*; Cunningham, *Growth of Engl. Industry and Commerce in the Early and Middle Ages*, p. 64 *seq.*, 1890); and the Cistercian order, through the activity which it displayed in sheep farming, promoted in a singular degree the production of the staple commodity of England. Through the immense extent of their property, variously estimated in the 13th and 14th centuries from a quarter to a half of the total landed property of England (Wycliffe, *de Eccl.* xv. p. 338; cp. Pearson, *Hist. of Engl.* ii. 497 (1867)), the churches and religious houses came to take an important share in the industrial development

of the country; and it is acknowledged that the clergy were mild landlords (see generally Stubbs, *Const. Hist.* iii. 562). The attacks of the Lollards upon the landed property of the church were inspired rather by *a priori* objections to the system itself than by any actual abuses to which it led; and the considerations which Bishop Pecock, writing in the middle of the 15th century, alleged on the opposite side are probably in the main just. "The treuthe is," he says, "that the tenementis and alle the possessiouns with her purtenauncis, which the clergie (religiose or not religiose) holden and hauen, is better meintened and susteyned and reparid and kept fro falling into nou3t and into wildirness, than if tho same tenementis and possessiouns with her purtenauncis weren in the hondis of grete lordis, or of kny3tis, or of squyeris. . . . The tenauntis, occupiyng tho tenementis and possessiouns with purtenauncis vndir the clergie, ben esilier tretid, lasse disesid, and not greeued bi extorcioun, as thei schoulden be, if thei helden the same tenementis and possessiouns of temporal lordis or of kny3tis and squyers." Among other points in favour of those who held of the church, Pecock notices that their tenure was less liable to be disturbed than that of those who held under lay lords (*Repressor of overmuch blaming of the Clergy*, vol. ii. p. 370 *seq.* (ed. Babington, 1860)). It has been noticed by critics least friendly to the mediæval church that it was such causes—the known advantage to the tenant—that did much to reconcile public opinion to the enormous estates held by the church (Pearson, *Hist. of Engl.* vol. ii. p. 502; Rogers, vol. i. p. 160). That at the close of the Middle Ages the state of things was somewhat altered, and the abuses which had arisen with respect to the management of church property called forth well-founded complaints (cp. *Dyaloge betwene a Gentillman and a Husbandman*, 1530 ed. Arber, 1871, p. 134 *seqq.*, *Ballads from Manuscripts*, ed. Furnivall (1869), vol. i.), need not be denied; but the question, which is a very debatable one, lies beyond the province of the present article. R. L. P.

[See Sir F. Palgrave, *History of Normandy and England*, esp. Introd. to vol. iii.]

THE ROMAN CATHOLIC SCHOOL (as the economic school of thought which has developed within the Roman Catholic Church has been termed) is of comparatively recent origin. Though the date of its birth cannot be fixed with exactness, it certainly goes as far back as September 1869, when a conference of bishops giving special attention to social questions met at Fulda in Germany.

No doubt the Catholic church, through the fathers in the first ages of Christianity, and through its doctors in the Middle Ages, had always occupied itself with the social question from certain points of view, especially with regard to the relations between the rich and the poor. Through its agency, indeed, lending at interest had been forbidden by the civil law (see AQUINAS; CANON LAW; CHURCH, MEDIÆVAL). But it was not till quite recently that it published a programme of economic reforms, and turned its activity particularly to labour questions. Without imputing any interested motive, it may be supposed that this action of the Roman Catholic church has been not uninfluenced by the desire to regain the power over the labouring classes which socialism threatened to wrench from its hands. Up to the present time, however, this object does not appear to have been attained. In spite of the armies of workmen which the church leads as pilgrims to the feet of the Pope, in spite of the "workmen's clubs" (*Cercles ouvriers*) which the church strives to multiply in France, no profound impression seems yet to have been made on the masses of the labouring population; and it is from the ranks of the higher clergy and the aristocracy that it has almost exclusively drawn its leaders and even its adherents.

In England the late Cardinal Manning was prominent in labour questions. In the United States, Cardinal Gibbons has undertaken the defence of the Knights of Labour. In France Cardinal Langénieux, Comte Albert de Mun—an ex-cavalry officer and one of the most eloquent speakers in the French legislature, M. Harmel—a large manufacturer,—all three are organisers of workmen's pilgrimages. In Switzerland, M. Decurtins, deputy of the canton of the Grisons, has taken an active part in the labour laws passed in Switzerland of late years. In Germany, the Bishop of Mayence, Monsignor von Ketteler, now dead, was one of the initiators of the movement; at present there is the Bishop of Breslau, Monsignor Kopp, who played an important part at the International Conference of Berlin on the regulation of labour. In Austria, there have been Baron de Vogelsang, now dead, the Prince of Liechstentein, and others. Pope Leo XIII. has placed himself at the head of the movement. On several occasions he has shown great interest in social questions, especially by his famous encyclical of 15th May 1891 and his addresses to the workmen pilgrims.

By the vehemence of its criticisms of the economic organisation of the day, more particularly by opposing itself to individualism, self-help, competition, and the inordinate search for gain, also by the sombre picture which it paints of the condition of the working classes, the "Roman Catholic school" makes common cause with democratic socialism. Like it, indeed, it protests against *Manchesterthum*, against the body of teaching which regards personal interest as the only motive force of human activity, and the law of supply and demand as the sole regulator of wages. Hence

the appellation of "Catholic socialism" which it sometimes receives. However, it always refuses to accept this title. Indeed, it stands really at the opposite pole to the socialist school, for its objects are not only to *conserve* but also to *restore* the fundamental institutions of society, *id est*—religion,—family,—property,—employer system. It sees the solution of the social question, first of all, in the fulfilment of the laws of morality and religion, then in that *corporative system* which, in the words of Leo XIII., "comprises in itself almost all other works." This corporative system must not be confused with the co-operative system, so much extolled by some of the Protestant schools of socialism, or even with trade-unionism. The "Roman Catholic school" understands by this phrase associations of trades, composed *at one and the same time of masters and of men*, regulating in sovereign fashion, and by decrees fitted to each particular industry, the number of hours of labour, the rate of wages, and so forth; and invested with the rights of property in consequence of their status as corporate bodies, and with political power through their ability to elect their representatives in the chamber. The works of M. Harmel in the Val des Bois near Rheims are usually given as a type of the industrial organisation which is the ideal of this school.

In France and in the countries which have felt the influence of the French Revolution and of the movement of ideas which thence took its rise, the "Roman Catholic school" violently attacks the Principles of '89, holding them responsible for the state of agitation and unrest through which the nations of Europe are struggling. Thus the law of equal division of estates between all the children is regarded by the "Roman Catholic school" as the chief cause of the disorganisation of the family, whilst from the abolition of the corporative system the misery of the working classes is held to have mainly arisen.

The question of state interference has caused the division of the "Roman Catholic school" into two clearly-marked sections. The interventionist school, the names of whose representatives have been given above, labours steadily for state interference to regulate the length of the day's labour, for the enforcement of Sunday rest, for the abolition of usury, for the prevention of monopoly and speculation; in fact, for all measures which seem likely to raise the condition of the poorer classes. On the other hand, the "Liberal" section of the "Roman Catholic school" entertains a distrust of state interference in a coercive shape, which is no whit less than that felt by the economic school of Adam Smith. It sanctions the application of state interference only in cases of clearly-proved necessity, and upholds liberty of labour and freedom of contract. It is also less bitter in its criticisms of the economic organisation of the day and confines its programme of social reform to the restoration of the authority of the church in society, of the father in the family, of the employer in the workshop, and to the exercise of social duties. Further, its characteristics are more of a lay nature; it refuses to be called "Catholic" in the narrow sense of the word, and opens its arms to all who desire to apply the historical method to the study of social facts. M. Le Play (*q.v.*), who died in 1883, is usually regarded as the chief of this school, which includes among its members several distinguished professors, for instance M. Claudio Jannet, professor at the Catholic university of Paris; Charles Périn, formerly professor at the university of Louvain, and his successor in the same chair, M. Victor Brants. It was believed that the Pope would give his opinion on the delicate point involved in these discussions in such a way as to decide the question. But the holy father, in his encyclical of May 1891 *de Conditione Opificum*, expressed himself in such general formulæ and made use of such diplomatic and guarded language, that each of the two sections of the school has been able to claim his high approval. Thus the encyclical declares "that the force and authority of laws are necessary to save the unhappy workman from those speculators who treat men as if they were machines,—who use them up in order to glut their own insatiable cupidity." Nevertheless, it also condemns state socialism "which aims at substituting state control for paternal care." Moreover, in his address to the workmen pilgrims on 19th September 1891, in which he commented on his encyclical, the Pope declared "that it must be taken as certain that no true and practical solution of the labour and the social question would ever be found in purely civil laws, however good they might be." It is therefore probable that these two main lines of thought—the one seeking a remedy for all human ills by methods closely allied to those of socialism, the other by strictly religious influences,—will continue to divide the "Economic school" now existing in the Roman Catholic church.

[Francesco Nitti, *Il socialismo cattolico*, 2d ed., Roux, Turin, 1891.—"The Catholic Church and Economics," J. J. Keane, *Quarterly Journal of Economics*, Oct. 1891.—C. S. Devas, *Political Economy*, London, 1892. Stonyhurst Series.—Von Ketteler, *Die Arbeiterfrage und das Christenthum*, Mayence, Kirchheim, 1866.—*Liberalismus, Socialismus, und Christenthum*, Mayence, Kirchheim, 1871, by the same author.—Rudolph Meyer, *Der Emancipationskampf des vierten Standes*, Berlin, 1882, 2d ed., 2 vols.—Charles Périn, *Le Socialisme chrétien*, Paris, Lecoffre, 1879.—Decurtins, *La question de la protection ouvrière internationale*, Berne, 1889.—De Mun, *Discours*, Paris, Poussielgue, 3 vols.—Harmel, *Catéchisme du patron*, Paris, 1889,—also *Manuel d'une corpora*

tion chrétienne, Tours, 1879.—Manning, *The Rights and Dignity of Labour*, London, 1887.—

The Journals and Reviews which are the organs of the "Roman Catholic school" are very numerous. The following are the most important in France; *l'Association Catholique*, a monthly review (organ of the school of the Comte de Mun).—*La Réforme Sociale* (organ of the school of Le Play).—In Germany: *Arbeiterwohl*, conducted by Abbé Hitze.—*Historisch-politische Blätter*;—*Christlich-sociale Blätter*.—In Austria: *Oesterreichische Monatsschrift für christliche Social Reform*, formerly conducted by Baron de Vogelsang; *Das Vaterland*.] C. G.

THE INFLUENCE OF PROTESTANT THOUGHT ON ECONOMIC OPINION AND PRACTICE.

The intention of this article is to trace the influence of Protestant thought, mainly on the continent of Europe, both in its original tendencies and in its historical development on economics. The outcome of these influences may be generalised under four heads, viz.: I. the principle of *Individualism* encouraging individual enterprise, the stability of private property, and the development of industrial progress; II. the principle of *libre examen* (the expression is that of Guizot), which in freeing the mind led indirectly to the liberation of trade, free competition, and the doctrine of *laissez-faire* as further developed by the French revolution; III. the Protestant *idea of the state* during the transition period, which helped in establishing the mercantile theory in Holland and England, and the cameralistic conception of political economy in Germany, since economic science was then regarded merely as a method of action, the object of which was the furnishing the state or its head with ways and means to carry on the government; IV. Protestant *ethics* in relation to the modern economic method, introducing the *Caritative* element of Christianity (*i.e.* that not only the selfish principle of supply and demand but Christian love and duty should be the guiding laws in economic action—the doctrine of Adolph Wagner) as a corrective of the purely egoistic theory.

I. INDIVIDUALISM.—Friends and enemies, Guizot, Seebohm, K. Marx, and E. de Laveleye, declare alike that the "history of capital and the supremacy of private interest," *i.e.* commerce in its modern aspect, commenced contemporaneously with the period of the reformation, accompanied as that movement was by many discoveries and inventions, and the recovered sense of personal freedom and responsibility. In *Protestantism and Catholicism in their bearing upon the Liberty and Prosperity of Nations*, by Emile de Laveleye (1875), the progress of economic enterprise is attributed to the superior education and enlightenment fostered by Protestantism, De Tocqueville ascribing to the Puritan discipline of the first settlers the same result in the commercial expansion of the United States. From Luther to Protestant divines of the present day the moral force of the dignity of labour and the duty of cheerful exertion in the subduing the earth by economic effort, have been held up to admiration, and have given an impulse to the economic life of Protestant countries. The *Wealth of Nations* appeared in 1775-76, and marks a revolution of thought in Protestantism in the author's mind, and a revolution of industry then commencing. "The machine is somewhat in the nature of Protestantism," says Dean Uhlhorn in his brochure on *Katholicismus und Protestantismus gegenüber der socialen Frage* (1887). Private property is encouraged by Protestantism. Luther, in his *Sermon on Usury* (1579), speaks of three grades "of dealing well and worthily with temporal goods." The highest is to allow ourselves to be despoiled of it without offering opposition, the lowest is to take neither profit nor interest, though he sees objections to this ideal being realised. Whilst Erasmus complained of the "rage of ownership," Protestantism endeavoured to make a compromise, maintaining the ideal in theory and encouraging what Fr. A. Lange calls a "moderate egoism," or "ethical materialism," in practice (see *Geschichte des Materialismus*, i. 254, 294. Cp. J. E. Thorold Rogers on *The Economic Interpretation of History* (1888), p. 83). Besold in the 17th century speaks of private property as of human origin, yet approved of in Holy Scripture. H. Grotius, at the head of the classical school of political economy in Holland, defends it. Pufendorff adopts it from him, and the theory dominated the old-fashioned economics in Prussia, until the new school of economists, with Ad. Wagner at their head, pointed out the importance of correcting the rigid theory of private rights as to property by the recognition of what is due to the community, and thus reconciling the principle of private interest with that of public advantage. This naturally followed on the growth of altruistic ideas affecting alike Protestant and economic thought. II. LIBERATION OF INDUSTRY follows logically from that of liberty of thought, developing the five points of industrial independence: freedom of labour, free trade in land, free movement of capital, freedom of industrial enterprise, and a free market regulated by demand and supply,—it further implies the removal of all governmental and trade restrictions. But between the original conception of these principles in the 16th century, and their realisation in the 18th, lies the intermediate economic period of III. MERCANTILISM, the reign of the "regal theory" of political economy as then held in Germany. It means that the object of all economic effort, and legislation directing it, is for the benefit of the state and its head. This view of directing the economics of the nation by royal mandate is encouraged by the Protestant idea of the state. With the

break-up of the old feudal and ecclesiastical systems of social organisation a fusion is effected of all private and corporate economics in one *political* or *national* economy. The whole community assumes the character of an economic society, while it is directed by the central power,—absolute monarchy (*Geschichte der Nationalökonomie* von H. Eisenhart, 1881, pp. 6, 7; also *Bau und Leben des socialen Körpers*, von A. E. Fr. Schäffle, vol. i. p. 17, 1875). Thus Luther favoured state magazines for providing the people with food. In England the secularisation of church property became a measure of state policy, and, in turning public into private property in land, had very important results to the rural economy of the country (see T. E. Cliffe Leslie's *Land Systems*, p. 213 *seq.* and *passim*). Measures affecting commercial tariffs for the encouragement of native industry, even the proposal of graduated taxation for the purposes of mitigating the evil effects of a debased currency, and the rapid growth of pauperism, which K. Marx attributes to the contemporaneous rise of Protestantism and commercial industry (see *Das Kapital, Kritik der Politischen Oekonomie*, 2d ed., 1872, p. 750 *seq.*, and cp. p. 128 *ib.* on the progress of capitalism in Protestant lands), all these affected the development of economic science at this time. It simply became a method for increasing the resources of the country. Roscher shows how closely connected such questions were with the doctrine of mercantilism (see MERCANTILISM). Bornitz, Besold, Klock are the German representatives in the earlier part of the 17th century of this stage of economics as a science of state finance. Petty, Locke, North represent the same tendency in a more advanced state in England. Cromwell's Navigation Act (1651) is a practical illustration of it. They show the influence of Protestantism, encouraging *national* egoism as a national duty. In more recent times the various forms of state-legislation, favoured by Prince Bismarck under the name of "practical Christianity," or of government interference with factory labour, as promoted by Lord Shaftesbury in the name of Christian philanthropy, as well as the previous liberation of the Prussian peasantry by Von Stein, and the "organised benevolence" of Wichern and Huber, the pioneer of German co-operation, are all the outcome of Protestant Christianity and patriotism combined, with a view to give effect to the theory of "freedom of person and property under a simple and strong government."

IV. The ETHICS of Protestantism, as modified by the philosophy of Fichte and Hegel, have exercised a profound influence on the principal writers belonging to the modern "historical school" of political economy in Germany. The state now comes to be regarded as the *ethos* or representative of what is best morally in the community, and the church in alliance with it as the upholder of a higher ideal of the economic man. Thus in the *Handbuch der Politischen Oekonomie* (1st ed., 1882; 3d ed., 1890), among whose contributors we mention, as members of the historical school, L. Brentano, H. von Scheel, and Ad. Wagner, who lay stress on the importance of Protestant Christianity, we are told that ethics teach "social man the duty of not only following egotistically his own interest, but also the welfare of others, and unselfishly to provide, according to his ability, the community with the requisites for the material and spiritual elevation of his fellows" (p. 49, 1st ed.) The state is defined as the grandest moral institution, bound to use its force in the pursuit of all economic interests, and by rational state-intervention to supplement the deficiencies of self-help (*ib.* pp. 52-54). Wagener, the privy councillor (to be distinguished from Ad. Wagner the professor, several times mentioned in this article), as a leading Protestant layman in Prussia, and Bishop Martensen, as a Danish churchman, both look up to the state as the power which should bring about "a just distribution of the common social product of all for all." Sismondi, representing Genevan Protestantism, was one of the first to discard on religious grounds the supreme rule of *laissez-faire*, and calls on the state "to regulate the progress of wealth,' defining political economy as *la plus sublime Science de la bienfaisance*. Schäffle, as the representative of South German Protestantism, is the most cautious, as well as, next to Roscher, the most erudite advocate of this theory, which makes man, not money, the object of all economic exertion, and in which humanistic Protestantism and economic humanism may be said to be mixed and merged. By humanistic Protestantism we mean the modern form of it, which lays stress on the humanities taught in Christianity, and by economic humanism we mean the more recent efforts to treat political economy as a science which has for its object the improved condition of humanity as a whole. The question is no longer, says Roscher, "what are the laws of political economy, but what ought they to be,—not an inquiry into the principles which govern the accumulation of wealth, but as to what is man in his economic relations, what he does, what he wants, what he is to be" (*Geschichte der National-ökonomik in Deutschland*, 1874, pp. 1033-34). To conclude, from the days of Luther to those of Leibnitz, and down to our own times, Protestantism, faithful at heart to its original aim, the liberation of the mind —though for a time diverted from this object by yielding to the opposing opinion—submission to dogmatic assertion,—again accepting the simpler doctrines of earlier Christianity,—has continually exercised a weighty influence on

the evolution of economic thought. Political economy itself is regarded by one school of the present day as having gone through somewhat similar successive stages, establishing at one time as its foundation the principle of sturdy self-dependence, accepting at another the silken fetters of state tutelage, then passing on to the absolutism of scientific dogmatism during the era of "liberal mammonism," and rising at last to an ethical conception of its mission as the science of a free yet harmonious organisation of industry, destined to attain the highest economic interests of mankind, the highest developments of human culture.

[Frederick Seebohm, *The Era of the Protestant Revolution*, 1874.—M. Guizot, *De la Civilisation en Europe*, 6ème ed., 1861, 12ème Leçon.—W. Hohoff, *Protestantismus und Socialismus:—Historisch-politische Studien*, Paderborn, 1881. The chief value of this work consists in its quotations from Comte, L. Blanc, and German authorities on the economic influences of the Reformation from a Roman Catholic standpoint, see esp. pp. 83-116, 162-168.—Alexis de Tocqueville, *De la Démocratie en Amérique*, 16ème ed., 1874, iii. pp. 8-10, 42, 213-215, 226-227.—Friedrich von Baerenbach, *Die Socialwissenschaften* (1882), pp. 241, 244, 278.—T. E. Cliffe Leslie, *Essays on Political and Moral Philosophy*, p. 167 *seq.*, this passage was originally published in the *Fortnightly Review*, July 1875.—A. E. Fr. Schäffle, *Das gesellschaftliche System der menschlichen Wirthschaft* (1873), i. p. 41; ii. 15, 527-528.—*Bau und Leben* (*loc. cit. supra*), i. 691-693.—C. Kautsky, *Thomas Morus.*] See SOCIALISM in App. Vol. III. M. K.

CHRONOGRAM AND HEXOGRAM. Chronograms and hexograms are diagrams "showing the intensity of a phenomenon at various periods of time, by the rise and fall of a curve within a system of co-ordinates expressing a measure and time. If this occurs in an automatic register, observation and representation take place simultaneously. But the hexogram may also be constructed later" (see GRAPHICAL METHOD).

[*Annals of the American Academy*, Supplement, May 1891, "The History, Theory, and Technique of Statistics," by A. Meitzen.]

CHURCH-SEED (*cherchesed, chercheomer, chercheambre*). "A certain measure of threshed wheat that every man was bound to bring to the church, in the time of the Britons and Angles, on St. Martin's Day. But, since the coming of the Northmen, many lordships took it to their use and gave it according to the ancient law of Moses by the name of "first fruits," as you will find in the letters of King Knut that he sent to Rome, and is called church-seed *quasi semen ecclesiae.*" The above definition is given in the *Expositio vocabulorum* in MSS. St. Paul's, Liber Pilosus, Red Book of Exchequer, and other Anglo-French glossaries of the 13th century. In the Saxon laws, however, under the head of *De primitiis seminum* we read "And church-scot at Martinmas; and whosoever holds it over that day let him pay it to the bishop and indemnify him xj fold and to the king 120s." (Cnut, *Eccles. Dooms*, 8). From this it would seem that the word is a corruption of church-scot (cherchescaet)—the "c" becoming mute—and in the Norwich MS. of the glossary the termination is given as "soht."

H. Ha.

CIBRARIO, GIOVANNI ANTONIO LUIGI, Count, was born 1802, in Turin. He entered the service of the Sardinian government 1824, was entrusted in 1832 with diplomatic missions in Switzerland and France, and in 1833 with Austria, and took possession of Venice on the 7th of August 1848 in the name of King Charles Albert of Sardinia. In 1852 he was appointed minister of finance in the cabinet of D'Azeglio, and in the same year became minister of public instruction. In 1855 he was appointed minister of foreign affairs. He died at Salo (Brescia) in 1870. This distinguished statesman has written an amazing quantity of historical studies, principally concerning the house of Savoy. As an economist he owes his fame to two books, the *Storia dell' economia politica nel medio evo* (2 vols., Turin, 1839), translated into French, with a preface by Wolowski (in 1859, Guillaumin, Paris), and the historical treatise *Della Schiavitù e del Servaggio e specialmente dei Servi agricoltori* (2 vols., Milan, 1868-69). Besides these larger works, some financial essays, reprinted in his *Opuscoli* (Turin, 1841), should be mentioned. M. P.

CINQUE PORTS. The name applied to the five towns of Hastings, Sandwich, Dover, Romney, and Hythe, which were incorporated for the defence of the realm and other purposes probably by Edward the Confessor. The "ancient towns" of Winchelsea and Rye, and several other places, corporate and non-corporate, were afterwards added as members. Some writers have tried to identify the five leading ports with the five Roman fortresses, which, under the *comes littoris saxonici*, guarded the south-eastern shore, but the better opinion seems to be that they were of Teutonic origin. It is probable that the trading interests of the ports first brought them into prominence. The inhabitants were fishermen, and they were accustomed to resort northwards a considerable distance to the banks at the mouth of the Yare to dry their nets and pack their fish. This practice developed into an important annual fair at Great Yarmouth, which was attended by fishermen and traders from various parts of the Continent. The maintenance of order, and the exercise of jurisdiction at this fair belonged to the portsmen from the earliest period of their history. Professor Montagu Burrows (*Cinque Ports*, London, 1888) traces the origin of all their distinctive institutions to their connection with this fair.

Jurisdiction was exercised in the "Court of Shepway," a body composed of the bailiff, and a certain number of freemen from each port, but the assemblies known as the "Brodhull" and the "Gestling," usurped its administrative powers, and the Lord Warden and his courts of admiralty, chancery, and pilotage, gradually encroached on its judicial powers.

The chief duties of the assembly were as follows: (1) to exercise jurisdiction at Yarmouth fair; (2) to fix the number and size of ships to be furnished for the defence of the realm; and (3) to safeguard the franchise of the ports.

The ports were at the height of their power during the reigns of John, Henry III., and Edward I., when their ships constituted the only existing English navy. During the 15th and 16th centuries they gradually declined owing to the filling up of their harbours, the necessity of a state naval organisation, and the growth of other commercial seaports. The assemblies still continue in name, and the Lord Warden may exercise certain minor judicial functions.

[*Charters of the Cinque Ports*, by Samuel Jeakes, London, 1728.—*Cinque Ports*, by Montagu Burrows, London, 1888.—Art. on "Cinque Ports" in *Encyclopædia Britannica*.] J. E. C. M.

CIOMPI (name supposed to be derived from the Fr. *compère*, used by the French soldiery of the Duke of Athens). The sudden uprising of the Ciompi in Florence, 1378, was one of those movements in Europe which took place during the half-century subsequent to the Black Death, and may possibly be regarded as due to the dislocation of industrial conditions brought about by the diminution in the numbers of the people. Immediately, however, the movement in Florence was due to (*a*) the rising of the lower guilds against the upper, especially against the great wool guild; (*b*) reaction against Guelfic tyranny; (*c*) political restlessness of the populace. Regarded from the standpoint of history, the rising of the Ciompi may be said to have been successful in bringing about a relaxation of the excessive domination of the greater guilds, but its effects at the time were somewhat various. At first it was entirely successful, the inferior guilds obtaining a much greater power, and the guild of the *popolo minuto* being established, but in 1382 the force of reaction led to the abolition of this latter, and to a considerable restriction of the advantages attained. The ground gained was, however, not entirely lost.

[*Gino Capponi* (Muratori, *Ital. Script.*, p. 1104, etc.).—Machiavelli, *Storia di Firenze*.]

E. C. K. G.

CIRCULATING MEDIUM. The circulating medium in all civilised countries consists at the present time to a very large extent of orders to pay sums of money in the form of bills and cheques. At the present time "Bank notes are no more than the mere small change of the ledger" (Newmarch, *Address as President of the Section of Economic Science, British Association*, Manchester, 1861). Coin plays a large part in retail trade, but its share in the more important transactions is now comparatively small. The circulating medium at the present time in this country may be said to consist of cheques, bills of exchange, notes, and coin; to these book transfers, where the accounts are under the same administration, may be added (see BANKING; CASH; CLEARING SYSTEM; CURRENCY.)

[For details "Paper on the Proportional Use of Credit Documents and Metallic Money in English Banks." G. H. Pownall, *Journal, Institute of Bankers*, October 1881;—other papers in same journal, and those of the Statistical Societies of London and Manchester, etc.]

CITATION. See JURISDICTION, SCOTCH.

CITATION. A document issued by the High Court in probate and divorce matters. Probate actions, which were formerly begun by the service of a citation on the defendant, are now opened by the issue of an ordinary writ of summons, but "citations to see proceedings" may be served on third parties who may possibly be interested in the matter, so as to bind them by the result. In divorce proceedings a citation is "extracted" and served on the respondent and the co-respondents immediately after the filing of the petition. E. S.

CITÉ OUVRIÈRE. This term is applied by French economists in a general sense to blocks of buildings rented to working-class families on such conditions that they may by payment of fixed instalments become the owners of their houses. The best known instance on the Continent is that at Mülhausen, where there is a settlement of 7000 persons, mostly employed in the industries of the town. Used in this sense, it is equally applicable to groups of workmen's dwellings in England and America which have been purchased by the occupiers through the medium of building societies or co-operative banks. But the term is used in a narrower sense to describe the famous *Familistère* founded at Guise by M. Godin. The *cité ouvrière* may be roughly described as an attempt to reconcile the capitalistic enterprise of the modern world with the craft association of the mediæval world. It is not a municipality established to provide for certain common wants out of revenues levied on individual inhabitants, but it is a manufactory so managed that its surplus profits are appropriated to develop human nature in all its mental, moral, and physical relations. The supervision of the municipality may be said to be superseded by the organisation of industry. Sanitation, education, and poor relief are all provided by a voluntary apportionment of the net rewards of common work, and public opinion takes the place of police. Perfect freedom of voluntary

association has eliminated the force of compulsory association. The city is dead but the citizen is alive, and the church based on labour has overcome the state, whose basis is taxation. The settlement at Guise, where this form of city life has been developed to the highest point (see the *Co-operative Traveller*, by E. O. Greening, Labour Association, 1 Norfolk Street, Strand, 1888), comprises about 86 acres, of which 11½ acres are covered by the iron works, 25 by public gardens, and the rest by the social palace, schools, institutes, and surrounding grounds. The iron works were opened by M. GODIN (*q.v.*) in 1846, and from that date up to 1852 he was gradually building up the business. An ardent disciple of the school of Fourier, he was determined to use his business as a means of elevating his employés, and he began to carry out his ideas by reducing the hours of labour, abolishing fortnightly payment of wages, altering the pay day from Saturdays to Thursdays and Fridays, and establishing a sick club governed by a committee of workmen. In 1859 he bought 15 acres of ground and began to build the first wing of the FAMILISTÈRE (*q.v.*) or social palace for his workpeople to live in. Building after building, institution after institution, have been added to the original plan, and now the settlement not only includes a co-operative store with departments for grocery, bakery, confectionery, drapery, boots and shoes, coals, butchery, and every article of prime necessity, but it provides its members with employment in a gigantic iron work, houses them in palatial buildings, nurses their babies as far as their mothers desire it, educates their children, provides library, news room, billiard room, refreshment saloon, theatre, music master, doctors and dispensary, assists them to wash and dry their clothes by machinery, assures them against the needs of old age, the accidents and ailments of life, and the loss by death of the wage-earner, and furnishes them with all the luxuries of life, including a co-operative garden filled with fruit and flowers. How has all this been done? The answer is, by the capitalist sharing the profits of the iron foundry among the workers, instead of keeping them all to himself. In 1877 M. Godin commenced the plan of sharing profits by giving a bonus on wages and accumulating the sum for the wage-earners. In 1880 he formed the works, social palace, etc. etc., into one great co-operative society with certain provisions for the whole becoming the property of the workers. The accumulated bonuses of the workers then amounted to £10,490, and the share capital held by M. Godin to £150,000. The division and appropriation of profits for the future were fixed as follows:—after payment of material and wages at market prices, a preferential 5 per cent of the gross profits goes to interest on capital and the remainder is divided in certain proportions between capital, labour, the latter including mental as well as manual labour, and social and benevolent institutions. There were, in 1884, 1452 persons employed in the foundry, and they were divided into five classes: (1) the director—M. Godin was director for life, and after his death he was succeeded, in 1888, by M. Dequenne, one of the workers; (2) a committee of nine; (3) 64 associates, persons of not less than 25 years' age, of 5 years' employment on the works, with capital of £20; (3) 148 sociétaires or special members who had worked 3 years; (4) 574 participants or ordinary members of 1 year's work and not less than 21 years' age; (5) 656 auxiliaries of less than 1 year's work. Besides these there were 209 outside shareholders who had been workers but had gone elsewhere or were on military service. Classes (1) and (2) receive special remuneration for management, (3) and (4) receive proportionate bonuses on wages accumulated as share capital, (5) only enjoys the benefits of a medical provident fund. From 1880 to 1884 over £115,000 of profits were appropriated to workers: in share capital about £100,000, in cash about £10,000, in education about £5000. Since then the share of the workers in the business has steadily increased. At M. Godin's death it amounted to about one half of the capital. A. K. C.

[A. Raffalovich, *Logement de l'Ouvrier et du pauvre* (1887), pp. 448, *seq.*—E. O. Greening, *Co-operative Traveller Abroad* (1888), pp. 60-173.—A. Perrot, *Les cités ouvrières de Mulhouse* (1889). *Twenty-eight Years of Co-partnership at Guise*, trans. by Aneurin Williams, Labour Co-partnership Association (1908).]

CITIZEN. The term citizen ought logically to be exactly correlative with the term city; but in actual usage this correlation is not observed. The term citizen is used to express three distinct shades of meaning; sometimes as equivalent to "member of a sovereign state" sometimes as equivalent to "member of a body of townsmen invested with municipal rights," sometimes as equivalent to "dweller in a town" as distinct from "dweller in the country." The title of a well-known series, the "English Citizen series," exemplifies the first of these uses; the second is exemplified in such a phrase as "the mayor, aldermen, and citizens of Liverpool"; and there would be no gross impropriety in speaking of the "citizens of Constantinople" although Constantinople is neither a state nor a municipality. When used in the first sense, the term "citizen" connotes more especially the rights and privileges, as the term "subject" connotes more especially the duties and burthens, of membership in a body politic. For this use of the term citizen is derived from ancient usage. The fully qualified citizen of an ancient city was member of a sovereign state, and within its bounds was a highly privileged person as

compared either with the slave, with the serf, or with the alien. The associations of the term "subject," on the other hand, are derived from the imperial and feudal phases of political society. The political changes of the last hundred years have lessened the interval between ancient and modern conceptions of political society, and have made the use of the term "citizen" in the above sense increasingly common. In the second sense referred to, as expressing membership of a body of townsmen invested with self-government, the term "citizen" has had a more continuous use. The establishment of the Roman Empire reduced the free cities of antiquity from sovereign states to municipalities. It was only as burgesses of one or other of these municipal towns that the inhabitants of the rural districts had any rights of self-government. In the Middle Ages self-government attained its full growth only in the towns, being restricted in the country by the power of feudalism. In some mediæval cities—in those of Flanders, of Germany, and above all of Italy,—municipal self-government expanded into something like the sovereignty of the Greek city. It is only in modern times that town and country have been generally assimilated in point of self-government. In the third of the above senses, as expressing no more than the fact of dwelling in a town, the term "citizen" is of comparatively little import for politics or economics (see CITY: ANCIENT; MEDIÆVAL; MODERN). F. C. M.

CITY

Ancient, p. 290; Mediæval, p. 292; Modern, p. 295.

CITY, ANCIENT. The city with its correlative ideas of citizen and citizenship is the special feature of the stage of political development reached by the ancient civilisation of Europe. Cities are to be found in the history of oriental civilisation along the river valleys of the Nile, Tigris, and Euphrates; but they were hardly more than gigantic collections of walled-in populations depending for their existence on the conquest of some monarch or the cult of some god, and destitute of any inherent life of their own. The inhabitants were slaves and serfs rather than citizens. It is ancient Greece and Italy that gave birth to true city life, the life of self-governing freemen; and the political history of these countries is the history of a number of cities, their growth, their revolutions, their wars and their alliances, their conquests and their defeats. This preponderance of city life is reflected in Greek and Latin literature. To the ancient Greek city, society and state seemed identical terms, and Roman statesmanship knew no other method of conciliating the conquered than that of enrolling them on the civic registers of Rome. The history of the conquest of the European world by Rome is in fact the history of the conquest and foundation of a multitude of cities, and of their connection by a system of roads. The Roman empire was mainly a confederation of cities under an emperor or chief magistrate elected by the citizens or soldiers of the conquering city, and, when it fell, the cities that were its members survived as units of government, and the roads that connected them as channels of commerce for modern civilisation.

The *origin* of the Greek or Italian city is lost in the legendary past, but in all probability it grew out of the union of some great leaders of patriarchal clans or families, who, after subduing the aborigines, seized on and settled round some commanding position, safeguarded their new settlement with walls, and sanctified it with religious worship. The city-state thus began as a military, but soon became a commercial colony. Around the original dominant families, supporting themselves by the produce of the surrounding fields, cultivated by the help of the conquered natives, and submitting, for all the purposes of mutual protection, to the combined government of the heads of the families or clans, there would be gradually collected a mixed population of settlers, traders, and refugees. The latter contributed to the wealth and importance of the settlement, but had no voice in its management. As these outsiders grew in numbers—and this was especially the case in maritime settlements—and were called on to assist in protecting it, they naturally claimed a voice in deciding questions of peace and war, in dividing the spoils, and in making laws. The internal history of these ancient cities is largely taken up with the struggles between the bodies of old and new settlers for political power. In some cities the old families held their own, and then the government was called an *aristocracy*, in others the wealthier classes belonging to the old or new families secured power, and then it was called an *oligarchy*, in others the mass of independent inhabitants gained power, and then it was called a *democracy*. Often these various forms of government alternated with each other according to external or internal changes of conditions, and sometimes a single individual, relying on the support of the excluded classes, seized the reins of government, and then it was called a *tyranny*. Except in cities like Athens, Sparta, and Rome, where conditions were, for a long time, especially favourable to one form of government, the political equilibrium remained very unstable.

The *political power* for which the inhabitants of an ancient city contended was something unknown in the mediæval and modern world. (1) each city with the country dependent on it, was originally no part of a larger state or system to whose authority it had more or less to bow, but was an independent sovereign power, waging war and making peace on its own account, like the governments of large

European kingdoms in the present day. The chief officers of the city had not merely to preserve peace at home, they had to defend it from foreign foes, they had to play the part of generals and diplomatists as well as of magistrates and councillors, and each citizen had to be ready to fight as well as to vote, to run the risks as well as reap the rewards of war. (2) the city was, in the eyes of the ancient citizen, his church, and the city magistrates were *ex officio* priests. He might continue to take part in the ancestral worship of the family, the clan, and the tribe, but the gods and temples and ceremonies of the city overshadowed the divinities and altars and festivities of the hearth; and where, as at Athens, the state religion gave rise to the state drama, the city wielded the power of the pulpit and the stage. Everywhere the secular arm of the state was supported and consecrated by its spiritual authority, and patriotism and piety became indissoluble sentiments. Exile carried with it all the terrors of excommunication, and the cityless man became a social outcast without gods and without duties.

One consequence inevitably followed from the supreme position of the city-state. The individual liberty of the citizen was greatly curtailed, and against the demands of the state he had no rights. In such a small community the tax upon person and property was universal and practically unlimited, and private life was never free from state interference. There were state regulations about dress, food, marriage, exposure of deformed children, education, religious observances, political services, succession to property, and indeed very few matters were left to individual choice and conscience. Civil liberty, as we understand it, did not exist. The liberty of the ancient citizen was twofold—political and personal. He was free from the dictation of any person outside the city, and he was free from the dominion of any person inside the city. He was neither the subject of a king nor the slave of a master, but he was the servant of the constitution. Whether the constitution was aristocratic, oligarchic, or democratic, the essence of citizenship was everywhere much the same. It consisted in the privilege to own land, to serve in the ranks of the heavily armed soldiery, to vote at the civic assembly, to elect and be elected to office, deliberative or judicial.

The government of the city-state always turned on the general assemblage of the body of citizens, whether the title to citizenship rested on birth, wealth, or personal freedom; but subject to this principle, the functions of government were distributed, and the control of government exercised very differently under an aristocratic, oligarchic, or democratic system. Under the latter system, as developed at Athens, the public assembly was practically omnipotent. It supervised all the chief functions of government, it voted taxation, it debated on and passed laws, it appointed subcommittees to act as courts of justice and financial and administrative commissioners, it elected its executive officers, it exacted an account from every official at the end of his term of office, it received ambassadors, and decided questions of peace and war. The distinction of judicial, legislative, and executive powers was recognised, but the division rejected. In an aristocratic or oligarchic constitution a large portion of the functions of government was invested in irresponsible officers, or in a small council of state, elected possibly by the whole body of citizens, but rendering no account to it. There were also mixed forms of government to be found, such as that of ancient Rome, where the popular assemblies were large, but had little practical control over state policy, which was directed by the senate, consisting of all those who held or had held the chief executive and judicial offices of the state. Below the citizens, occupied chiefly with war and politics, are to be found in most city-states a body of inhabitants not possessing political rights, but enjoying a large amount of civil privileges in return for special taxation. These aliens consisted either of conquered "natives," cultivating the soil in a serf-like dependence on the citizen owners, or immigrants carrying on commerce in a more independent condition. Many of the latter might have been citizens of some other city, and were from time to time, under a democratic *régime* admitted to the full privileges of citizenship in their adopted place of residence. At the bottom of the social structure in every city-state came the slaves. No form of constitution in the ancient world made any difference in this respect, and a democracy of freemen was at bottom an aristocracy of slave-owners. Thus at Athens and in the dependent country, there were at one time over 400,000 slaves, as against 10,000 resident aliens and 21,000 male citizens of full age; and at Rome the increase of slaves was prodigious as conquests extended. These slaves were not only employed in domestic service, but in mining, manufacture, and agriculture. Much of the commercial and clerical, and even the professional work was done by them, so that free labour found itself hemmed in on every side by servile labour. Slaves formed, in fact, the bulk of what may be called the working classes; and as slaves multiplied, manual labour naturally became despised by the free citizen. Two gigantic evils ensued. First, there was always danger of servile revolts; these when they broke out, as was often the case, had to be put down with relentless cruelty, especially in small states where the body of citizens formed a minority of the inhabitants. Second, class antagonism was engendered

within the civic circle. Finding very few openings for his energy, enterprise, or intelligence; forced into no intimate social relations with the rich by common industrial work; feeling the contrast between the real inequality of fortune and the nominal equality of political power,—the poorer citizen was filled with envy and hatred against the rich. He began to look to the state as a means of re-adjusting the distribution of wealth. Civil war became the order of the day. If the poor got the upper hand, then confiscation and banishment, if not massacre, followed; if the rich maintained their position, it was only by means of doles and bribes. The state was either paralysed by internal conflict or demoralised by corruption. A period of disturbance destroyed the delicate organism of the city polity; loss of civic independence and absorption into the Roman empire were welcomed as the only refuge from the weary round of revolution. The city-state lost its local sovereignty, and became an organ of imperial administration. Slavery, however, which was the curse of the city-states, was equally the curse of the Roman empire. It spread from the towns to the country. It had poisoned the life-blood of citizens by corrupting the artisan; it destroyed the nurseries of soldiers by supplanting the peasant.

[See *La Cité Antique*, by Fustel de Coulanges, Strasburg, 1864.—*History of Civilisation in Europe*, by Guizot (trans.), ch. ii.—*Aristotle's Politics*, by Newman, Oxford, 1887.—*Historical Essays*, by Freeman, 2d series.—*Public Economy of Athens*, by Böckh.—*History of Greece*, by Grote.—*History of Rome*, by Mommsen.] A. K. C.

CITY, MEDIÆVAL. After the downfall of the Roman empire and the recolonisation of Europe by the various bands of invading tribes it was the cities planted or fostered by Rome that safeguarded the political heirloom of ancient civilisation. But when their inhabitants found breathing space to look round, they found the world completely changed. The centre of political power had drifted from the town to the country, and in the towns themselves the secular traditions of Rome, which had found support in civic aristocracies, resting on the sovereignty of Cæsar, were overshadowed by the spiritual influence of the Christian clergy looking more and more to the supremacy of the Pope. On the one hand the status of citizen with his urban dependents had given way before that of the chieftain with his rural retainers, and the citadel was being eclipsed by the castle; on the other hand the prestige of the curia and the magistrate was paling before that of the church and the bishop. In many a town through the dark ages the buckler of religion was the only weapon of defence against the arm of worldly power, and the altar the only asylum for the victims of oppression. But as the two great powers of the Middle Ages became organised into feudalism and clericalism, municipalism was left to fight for itself. With the re-settlement of Europe and the revival of the demand for manufactures the cities naturally became the centres of industry and exchange. They found themselves, however, no longer independent states like the cities of ancient Greece and Italy, nor units of an imperial *régime*, but the fragments of an old system or the factors of a new, surrounded on all sides by a fierce military aristocracy looking with greedy eyes on their growing wealth. Increase of resources naturally inspired the townsfolk with the spirit of resistance, and about the 12th century there was a general movement among them for securing a distinct status in the mediæval world. Where the feudal *régime* was weak, and where municipal traditions were strong, as in the south of France, north Italy, and the eastern portion of Spain, or where natural conditions were favourable, as on the northern coast of Europe, on the Rhine, or on the Adriatic, there the townsfolk easily succeeded in winning quasi-sovereign powers, waging wars and making peace, forming alliances and embarking on conquests like the cities of old. But in the north of France, in England, Flanders, and Germany, where the feudal *régime* was strong, or where civic life was not deeply rooted in the soil, but was a plant of recent growth, there the cities, whether Roman or Teutonic in origin, had to engage in a tough struggle with their feudal lords, whether barons, bishops, or abbots, to secure some measure of self-government. Although fighting separately, they found a centre of support in the power of the rising monarchies of France and England and in the prestige of German imperialism, and by the tacit acquiescence or active assistance of their respective allies the communes of France, the towns of England, and the free imperial cities of Germany, won valuable privileges.

The revival of civic life in the cities of western Europe is therefore the common feature of the 11th and 12th centuries, but the development of that life varied greatly with surrounding conditions. The reception of a fierce feudal nobility into the bosom of the Italian republics, the commercial enterprise of the HANSEATIC LEAGUE (*q.v.*), coupled with the weakness of the central power in Germany, the natural advantages of the Flemish towns, the frequent appeals of the French communes for the intervention of the Crown, the closer touch of town and country in England, necessarily reacted on the civic politics of each country. But, in spite of the differentiation of structure by environment, certain features were general in most of the mediæval cities. They were based on work, not on war, and they flourished rather by commerce than by conquest. Whether, like most English, German, and Flemish cities, the mediæval city gradually grew out of the new rural colonisation;

or whether, like the French, Italian, and Spanish towns, it was a revival of old urban life, still the mainspring of its existence was the demand of the country-folk for the industrial products of the townsfolk. The shopkeeper and the merchant were in most cases the founders and restorers of civic life in the Middle Ages, and its humble origin explains the timidity that often characterised its action. Even when the cities rebelled against their feudal lords, they did so in self-defence, and were eager to purchase terms of peace. It was only the Italian cities with their feudal nobles that developed the haughty and aggressive spirit of the ancient republics, and made a business of bloodshed rather than of barter. The close of the period of conflict between the cities and their lords was in most cases marked by articles of peace called charters, and even in those parts of Europe, where no actual conflict broke out, the granting of charters became the fashion. Though differing in style and substance, these charters conferred much the same public liberties everywhere — exemption from arbitrary taxation, right to local jurisdiction, the privilege of enfranchising the villein who had been received for a year or a year and a half within the city's walls, and the power of electing officers and raising militia. To these public liberties private liberties were generally added, such as the right of citizens to marriage without the consent of their lord, the right of leaving their property to their children, and the like. But such privileges were not granted without fixed payments to the feudal lord on the part of the community in lieu of the uncertain exactions that had been previously levied in the shape of poll taxes and transit dues from individual traders. One important result followed from such fixed payments, namely, freedom of trade within the area belonging to the feudal lord, an area which gradually extended with the extension of the domain of the feudal over-lord or king. As the wealth of the cities increased under these favourable conditions, the fixed payments, which had taken the place of the old services and taxes, were supplemented by demands for extraordinary subsidies, and in settling these extra payments the cities came to be represented in the council of the nation, like the other feudal tenants, and an urban commonalty was eventually formed by the bond of common interests. When once the status of the city was more or less secure, its civic constitution underwent a change. The democratic equality of an age of confusion, based on individual strength and courage, gave way to the oligarchical inequality of a more settled state of society, based on wealth and intelligence. The meeting of all the inhabitants of the city to resist feudal aggression was superseded by the meeting of the chief owners of houses and shops to promote commercial enterprise. Trade being more and more the great interest of the city, the great merchants grew in prestige, and in their associations or guilds gained political power.

The origin of the civic GILDS (*q.v.*) is to be sought in remote antiquity. The simple idea (see Stubbs) of a confraternity united for the discharge of common or mutual good offices, supported by contributions of money from each member, and celebrating its meetings by a periodical festival, may find parallels in any civilised nation at any age of the world. The ancient guild is simply the club or association of modern life. It was formed on the analogy of the family group, and was in many cases consecrated by religious ceremonies. The ends it subserved were very various—relief in poverty, sickness, old age, or in temporary difficulties, in loss of property, in making pilgrimages, dowry on marriage, repair of roads and bridges, and churches. The tendency to unite in frith guilds or clubs for mutual protection became general throughout Europe in the 9th and 10th centuries. In parts of the continent these guilds were roughly repressed, but in England and in the more independent towns of the continent they formed more and more the basis of urban life, and as trade and commerce became the chief interests of the towns, merchants and traders naturally formed their guilds or associations on the analogy of those already existing. As the maintenance of the privileges and immunities of towns became more and more a matter of money payment, the wealthy part of the commercial community that made itself responsible for this payment, and thereby protected the town and its trade from feudal encroachment, absorbed civic power. In many cases charters of incorporation were granted or confirmed to the chief guilds or guild. In fact these corporations were invested with an urban lordship, ranking side by side with the smaller rural lordships, exercising jurisdiction, enacting bye-laws, levying taxation, organising the militia, repairing the city walls, in short, carrying on all the functions of government within a limited area. The membership of a guild then became recognised as the passport to civic privileges, and so long as the membership in some guild was open to every inhabitant with a stake in the city, the constitution remained more or less democratic. But the enhancement of the commercial privileges secured by the cities made the merchant guilds more and more reluctant to admit new members. Below the merchant guilds and outside the constitution, there were formed trade or craft guilds of the small manufacturers or artisans, weavers, shoemakers, carpenters, and the like. The greater folk of the large capitalists stood over against the lesser folk of the small capitalists, and as the numbers of the latter increased with the growth of manufactures, and the influx

of countrymen into the towns, a struggle for power ensued between the two classes of guilds, and in some of the continental cities, especially in the Rhine valley, took the form of civil war.

The result of this struggle was in many instances the enlargement of the civic constitution by the admission of the craft guilds, but these in turn became exclusive, and largely directed towards securing markets for their goods, while with the growth of capitalist manufacturers and the separation of masters and men in various industries, the artisan population of modern times began to grow up and form a fresh urban community. With the spread of the Reformation a strong tide of feeling set in against guilds in general, and we find in England a succession of laws passed in restraint of their authority. Although shorn of some of their powers and privileges, the merchant and trade guilds managed to survive in a less exclusive form, and proved valuable sources of revenue in times of emergency. Henry VIII., Elizabeth, the Stuarts, and Cromwell alike received money out of their coffers, and in return were content to leave them the real centres of civic power.

In spite, however, of the prevalence of the oligarchical form of civic government, the mediæval cities were the nurseries of modern freedom, of civil and religious rights. Within their walls there grew up the professional classes—lawyers, doctors, teachers, writers, and the like, who gradually formed the intellectual leaders of the commonalty. The separation of municipal and ecclesiastical authority in the persons of the magistrate and town council and the bishops and clergy, tended to create a liberty of thought and action such as had been unknown in the ancient world with its identification of church and state, and prepared the way for the Reformation movement. At the bottom of the social scale the influence of civic life was equally beneficial. Although the mass of the townsfolk were in a very degraded condition, yet they were freemen and not slaves, like the artisans of ancient Greece and Rome, or serfs, like the rural population outside the city walls. The town labourers, too, enjoyed some portion of civil liberty and knew how to combine against oppression, and, while struggling to raise themselves in the town, found a response from their brothers on the land. The barriers between the rich and the poor were regarded as fixed, not as in the past by a supposed law of nature, but by a contrivance of man. The church had from early times set its face against slavery; the city bred the spirit that eventually killed serfdom. While the growth of the capitalistic classes, the rise of the professional classes, and the increase of the wage-earning masses were gradually modifying the life of the cities from within, their external relations to the monarchical *régime* which was being consolidated in most parts of Europe during the 14th, 15th, and 16th centuries, were slowly but surely modifying civic life from without. In France, Spain, Holland, and England, if not in Germany and Italy, the cities began to lose their local independence and quasi-sovereign powers, and to take their place in a more centralised system of national government. In Germany, owing to the weakness of the central authority, and in Italy, owing to the absence of any centre of national authority and the standing conflict between the adherents of the imperial and papal principle, the great Hanseatic cities and the republics of Lombardy, were able for a longer time to maintain their independence, but the outbreak of the Thirty Years' War in Germany and the invasion of Italy by Spain and France undermined their sovereign strength, and in those countries, too, the cities began to sigh for the strong hand of central control visible in western Europe. The signs of central control were to be seen in the limitation of local administration of justice, in the extension of national taxation, in the formation of a national army and navy, and, in some countries, in the nomination of civic magistrates by the central government. The ideas of self-government nurtured in the seedplots of cities were being transplanted to the national soil, and what the citizens lost in local privileges they regained in national rights. The conception of national free trade, national freedom of thought, national freedom of action, took the place of that of local liberties and immunities. In a country like France, with a strongly centralised government, and with an undeveloped system of national representation, the decay of local independence was too rapid for national well-being, but in England the spirit of local independence took full possession of the central government. With the growth of industry in the 17th and 18th centuries and the spread of democratic ideas that found their most emphatic expression in the French Revolution, the system of commercial monopolies and privileges was shaken to the centre. With the improvement of communications by road, river, and canal the demand for national free trade and the destruction of remaining barriers between town and country or districts and provinces became louder and louder, and with the fall of the old commercial system civic constitutions cried out for reform.

Ghent may supply an example of the mediæval city on a very large scale. Favoured by natural conditions, it was one of the earliest places of the north-west part of continental Europe to become the centre of trade and industry; and to develop the power of defending its growing wealth. Towards the close of the 12th century it purchased commercial and political privileges from its feudal lord, the Count of Flanders, and secured some increase of municipal self-government. Civic jurisdiction took the place of manorial, and

although at first, as in other cities, the local magistrates were appointed by the feudal lord, yet in time the power of election was granted to the citizens. A later charter gave the power of fortifying the city and of raising a militia. By the beginning of the 15th century the external circuit measured 9 miles, the city area was broken up into easily defensible districts by the arms of the river, the banks being connected by drawbridges, and at the sound of the famous bell Roland, 20,000 armed men prepared to fight for their liberties. The constitution of the city was originally democratic though controlled by the feudal authority above it, but, when municipal charters had conferred complete self-government, the power of the merchant guilds gradually transformed it into an oligarchy. In the 14th century the city was torn asunder by the internal factions of the merchant and craft guilds. The latter, especially those of the wool-weavers, had been established very early in Flanders owing to the wealth of the manufacturing industries and the necessity of defending them against the merchants, and it was only after a fierce and bloody struggle that political power was redistributed on a broader principle by the absorption of the merchants' guilds into the trade guilds. The final shape the constitution assumed in the 15th century was as follows:—The population was divided into fifty-two guilds of manufacturers and into thirty-two tribes of weavers, each fraternity electing annually or biennially its own deans and subordinate officers. The senate, which exercised functions legislative, judicial, and administrative, subject to the feudal court of appeal sitting at Mechlin and to the sovereign authority, consisted of twenty-six members. These were appointed partly from the upper class or the men who lived upon their means, partly from the manufacturers in general, and partly from the weavers. They were chosen by a college of eight electors who were appointed by the sovereign on nomination by the electors. The whole city in its collective capacity formed one of the four estates of the province of Flanders. The quarrels of Ghent with its liege lord generally arose from the demands of the latter for extraordinary subsidies to raise a mercenary force. If the subsidy was refused, war as often as not ensued, and though the burghers might be defeated on the open field, yet they were unassailable behind their walls against the armed force of feudalism. It was only when standing armies took the place of feudal militia and political passions divided the city, that Ghent had to submit to the loss of its liberties.

[Motley, *History of the Dutch Republic.*—Froissart.—Philippe de Comines.—Hallam's *Middle Ages.*—Guizot, *Civilisation in Europe and France.*—Sismondi, *Histoire de la chute de l'Empire Romain et du Déclin de la Civilisation—Histoire des Républiques Italiennes du Moyen Age.*—Stubbs, *Constitutional History.*—Hallam's *Constitutional History of Europe during the Middle Ages.*—Freeman's *Essays*, 2d series.—Gneist's *Self-Government in England* and *History of English Constitution.*—*English Guilds*, by Toulmin Smith.—*Guilds*, by C. Walford.—*Wealth of Nations*, by Adam Smith, bk. iii. ch. iii. and iv.—*Hanse Towns*, by H. Zimmern.—*Histoire des Français* by Lavallée, vol. i.—Maurer's *Geschichte der Stadt-verfassung in Deutschland.*—Bryce's *Holy Roman Empire.*] A. K. C.

CITY, MODERN. The *modern city* is in some respects a revival of the ancient city of the Roman empire. It is a unit of administration in a larger state, and its powers and privileges are strictly dependent on the central authority, whatever be the nature of the latter. It differs from its prototype: *first*, because the principle of its government is democratic, not aristocratic; *second*, because the scope of its governmental authority is strictly defined by statute law, and not by custom or conquest. Residence or payment of rates in a certain area are the modern titles to urban citizenship; popular election or selection by an elected body is the general method of appointing the municipal administrator; bye-laws form the extreme limit of the city council's legislative power; and rates raised in a certain manner are the main sources of civic revenue. The time of residence, the amount of the rates, the method of election, the qualifications requisite for municipal honours, the extent of administrative functions and of the by-laws, the incidence and assessment of rates, may vary enormously in the different countries of Europe, in America, in the British colonies and Indian empire; but in all parts of the world of modern civilisation, with the exception perhaps of Russia, the above features characterise the modern city. Any man, and in the most advanced countries any woman, is at liberty, by taking a certain course of action which is open to all, to exercise the rights of citizenship in an urban community. He can be only prevented from exercising such rights by his own choice, fault, or misfortune. Physical, mental, or moral obstacles, that is to say personal impediments, may still exist, but there are no insurmountable barriers of law or custom.

The subordination of the modern city to a central authority shows itself chiefly in the sharper line which is drawn in modern times between local and national affairs, only those affairs being local which are by their very nature rooted in a clearly defined area. The mediæval city in the time of its strength had, as we have seen, within its boundaries almost complete self-government. It administered its own justice, largely based on customary precedents, it assessed its own rates and taxes, and handed over a lump sum to the central government, it preserved its own peace and order, and it raised

its own militia. The only sovereign power it did not possess after the rise of national government was the right of making peace and war. The modern city has almost entirely lost the right of local jurisdiction, it raises its own rates but has its taxes collected for it by national officials, it is in many cases responsible for its own peace and order, but it has no control over an armed force, and has to ask for its help if it requires it. On the other hand it exercises many local functions which in the Middle Ages were either left to the church or to private enterprise or to compulsory service, or were disregarded. Poor relief and education are now supplied or supervised by the chief civic body or by co-ordinate bodies. Sanitation is a matter of public concern not of private caprice, roads and bridges are constructed and repaired at the public expense not by means of private tolls, and lighting and water supply, in old times left to nature, are controlled if not provided by the municipality. The line drawn between local and national affairs varies in certain points in different countries, but, speaking generally, local affairs are those matters that touch on interests which are more immediately connected with the city's welfare, which the ordinary self-interest of the citizens is supposed to be capable of managing, and which do not admit of uniform regulation, *e.g.* roads, bridges, markets, harbours, lighting and watering ; while national affairs are those in which the nation as a whole is more immediately concerned, which would not be provided for by civic self-interest, and which require uniformity of treatment. Such are civil and criminal justice, based on general principles of legal rights and penalties, national defence, postal communications, commercial regulations, and the provision of revenues required for effecting such purposes. Between the two fairly distinct classes of local and national affairs come those that are local in their application, and yet national in their interest—such as sanitation, police, poor relief, and education.

In the case of sanitation, the administration, though generally left in the hands of the city, tends more and more, with the spread of sanitary science, to be supervised by the central government. This at least is the principle on which local government in Great Britain is now conducted under various sanitary acts, and other countries are beginning to follow its example. In the case of police there is great diversity of practice in modern cities. From one point of view nothing is more distinctly a local affair than the preservation of peace and order within a given area, but from another point of view, namely, the grave danger to the nation as a whole of any local outbreak in a large centre of industry, it becomes a national affair. In all European countries as well as in America the police in the capital is under national not municipal control, but in the provincial cities practice varies according as the more or less direction is left to the central government. But in no country is the city left responsible to its own citizens alone for the efficiency of its police force, and in some cases, as in France and Belgium, there is a national or state police acting side by side with the local police. In the administration of poor relief there is also much divergence of practice. Sometimes the local body that administers relief is a committee appointed by the municipal council—this is the case in Germany and in some American cities ; sometimes it is the municipal council itself, as in France ; sometimes it is a separate local body for the most part locally elected but supplemented by justices of the peace, as in England ; but in all countries there is a tendency towards central control of local bodies in the matter of poor relief, and in this respect the local government board of England has led the way. Lastly, popular education is locally administered, but as a rule by bodies elected *ad hoc*, if not by a committee of the municipal council. The local body as a rule acts under state laws and sometimes by help of state subsidies, but it raises a local rate where schools are civic and not voluntary establishments.

But however much the scope of local affairs and the methods of administering them may vary in different countries, yet in all there is a large and on the whole an increasing amount of central control, financial and administrative. This control is exercised in England chiefly through the central departments, in America through the state, in France and Germany through the national executive, which has a voice in the appointment of the mayor and burgomaster, but in each case it is vital and vigilant. The local bodies are no longer independent organisms self-acting ; they are the appendages of a larger organism. Local *self*-government has given way to local government.

Manchester may be taken as a typical example of the modern English city. Although a flourishing town in the Middle Ages, and possessed of certain limited rights of self-government exercised through the court-leet, yet it did not become a municipality proper until the passing of the Municipal Reform Bill of 1835. It became a City in 1853 and a County Borough in 1889. With a population of 714,427, 1911 ; it is now the third (if Salford is included, population 1911, 231,380, the second) largest city in Great Britain. Its municipal business is administered by a Lord Mayor and City council of 123 members, 93 being councillors elected by the ratepayers in 30 wards, and 30 aldermen co-opted by the councillors. The Lord Mayor (title granted 1893) is elected by the council for a year, and is paid ; the rest of the council is unpaid. The council administers the sanitary

acts, maintains the police force, makes and repairs urban roads, controls building operations, and supplies electricity. It also, in virtue of special acts, supplies the town with water and gas. It manages the City Art Galleries, the Free Library, the Ship Canal, Higher and Elementary Education including the Municipal Secondary School, the municipal School of Art, and the School of Technology, the Principal of which is on the Council of the Victoria University of Manchester. The Guardians of the Poor for the various Poor Law Unions are elected by the ratepayers or magistrates. Justice is administered by officers of the crown, a stipendiary police magistrate, the Manchester city justices, the mayor and ex-mayor being *ex officio* justices, a recorder for more important criminal cases, a county court judge for small civil suits, and, finally, the assize judges as the highest criminal and civil court.

The town council's legislative power only extends to that of passing by-laws; the reasonableness of by-laws can be disputed in a court of law, and they are not binding like acts of parliament. The corporation and town council can sue and be sued like an individual. It must meet four times a year at least, it must appoint a finance and police committee, it must send in its accounts to the local government board, it cannot borrow money except with the consent of the local government board or some other central department, and it cannot raise money except in certain specified ways, chiefly by a rate on occupied houses, and for certain specified purposes. If it wants to have its powers in any way enlarged it must apply to parliament, whose creature it is.

[*Local Government and Taxation in the United Kingdom*, Cobden Club Series.—*Local Government*, Chalmers (English Citizen Series).—*Democracy in America*, De Tocqueville (tr. Henry Reeve).—*American Commonwealth*, Bryce.—*Stein's Life*, by Seeley.—Maurer's *Geschichte der Stadt-Verfassung in Deutschland*.] A. K. C.

CITY OF LONDON, COMPANIES OF. See Companies, City of London.

CIVIL LAW, in the widest sense of the term, denotes the law of the state, as distinguished from the law Christian or Canon Law (*q.v.*) In a narrower sense the term is used to denote the Roman law, the great storehouse of rules and principles from which the institutions of modern states have been in great part derived. The history of Roman law begins with the unwritten customary rules observed by the *gentes* and *curiæ* which made up the ancient city-state, and with the *leges* or written laws in which the sovereign people declared its will. When the plebeians made good their claim to political rights, the most important rules of the early law were roughly codified in the Twelve Tables (450 B.C.), and in process of time new laws came to be made by the assembly of the plebeian tribes; a *plebiscitum* had the authority of a *lex*. As the trade of the city increased, it was found necessary to supplement the old civil law by rules of a less formal and more rational character, such as might be applied to traders and others who were not Romans; these rules formed the so called law of nations, *i.e.* the law administered by Roman magistrates to men of all civilised nations. This wider law was afterwards identified with the law of nature, a conception borrowed from Greek philosophy. Nature implants in man the instincts which lead him to form societies and states, and nature endows man with reason, the power which enables him to improve legal rules, and to administer the law in a spirit of equity. With these philosophic notions the Romans combined great practical skill; their forms of conveyancing, their system of accounts, and the procedure of their courts have exercised and still continue to exercise an important influence on all the commercial transactions of the modern world. The success of their imperial policy gave them a wide field for legislation and administration; but empire brought with it a change in the character of the civil law. The public law of the ancient city was subverted in the interest of a centralised despotism; the private law, *i.e.* the law relating to property, contracts, family relations, etc., was greatly developed and improved; the emperors began by using the senate as their instrument of legislation; then they dispensed with formalities and assumed the right to make constitutions or new laws by their own authority. In applying the Roman law throughout the provinces, magistrates were much embarrassed by the number and complexity of legal rules and text-books. Several attempts were made to codify the whole law; and Justinian finally gave his sanction to a code of imperial constitutions, a digest of the works of the best jurists, and a book called the *Institutes*, which was to form the basis of legal education. These three works form the Corpus Juris, the authoritative exposition of the civil law.

In the history of Roman law we may study the origin of those commercial conceptions of property and contract which modern economists make the basis of their science. According to the old customary law, property belonged to family groups; the *paterfamilias* had no very extensive rights of alienation; things necessary to the family existence, such as land and slaves, were alienated with the cumbrous form called mancipation, other things only with the forms of a fictitious lawsuit. By the later law, the *dominus* or owner had extensive and well-defined rights of use and abuse; he could alienate *inter vivos*, and, within certain limits, by will, at his own discretion. The full rights of *dominium* were conceded to persons not recognised as owners by the formal customary

law; possession of land allotted by the state came to be equivalent to ownership; and equitable ownership came to be as safe, under the protection of the prætor, as the *dominium* of the Quiritarian or ancient Roman law. A thing which could legally be owned was said to be *in commercio*, a thing to be disposed of; such things were corporeal or tangible (land, goods, money, etc.) or incorporeal (debts and valuable rights). Immovable things (land and house property) are distinguished from movable things (goods, etc.) It is to be observed that the Roman law does not attach any special importance to property in land; the *dominus* of land came to have very much the same freedom of alienation as the owner of goods; a person not the owner of land acquired rights over it only by virtue of some definite contract or transfer of property rights on the part of the owner. The complication and difficulty of property law arise from the various arrangements by which the rights constituting full ownership may be separated from one another and vested in different persons. The custody and use of a thing which belongs to A may be transferred by agreement to B; A may be restricted in the use and alienation of his property by reason of rights vested in B: in other words, B may enjoy a servitude over the property of A. B may have a right-of-way over the land of A, a right to use the land for his own convenience, and this we may call a positive servitude. Or he may have a right to forbid the erection of a building on A's land which would obstruct the passage of light to a neighbouring house, and this we may call a negative servitude. Rights of way and rights to light are prædial servitudes; they cannot be claimed unless by the owners or occupiers of neighbouring property. There are also personal servitudes, rights over the property of another enjoyed by an individual without regard to his ownership or occupation of property. Of these the most important is usufruct, the right to use and take the fruits or profits of property belonging to another. Where money and goods are treated as capital, one person may have the usufruct or quasi-usufruct, the capital stock being preserved intact for the persons interested in the corpus.

The law of contract exhibits the same gradual extension of individual liberty as we observe in the law of property. Primitive custom hardly permits a person to alter his rights by his own act, or by private agreement with another. But in time reasons are found for enforcing certain kinds of agreement. These are (*a*) *real* contracts, *i.e.* those which are concluded by transfer of a thing. If *e.g.* a person actually receives a thing by way of loan or deposit, he is compelled to restore the thing or its equivalent. Barter is a real contract; it becomes binding when one party has actually performed his part of the bargain, *do ut des*. In the case of (*b*) *formal* contracts, where the agreement is binding because the parties have used some solemn form; they have exchanged the words of question and answer known as a stipulation (verbal obligation), or they have joined in making an entry of the debt in the creditor's ledger (literal obligation). Further, the law recognises *consensual* contracts, which owe their binding force to the agreement of the parties. In an action on a formal contract, claim and defence must be founded on the strict letter of the law; in an action on a consensual contract, plaintiff and defendant might be ordered to do what was fair and right. To the class of consensual contracts belong the most important commercial transactions—sale, letting and hiring, partnership, and mandate. Such were the lines on which the Roman lawyers constructed their system of proprietary and contractual rights. To give effect to the rights recognised by law is the office of courts and magistrates. At Rome and elsewhere the reign of force precedes the reign of law; self-redress is the rule of all early communities; it is only by degrees that the state assumes authority to decide private disputes. First we have customary rules by which money payments might be made in atonement for wrongful acts; there are also customs and forms by which private transactions are placed under public protection—a sale, a will, or a contract is made in presence of the people, or of witnesses representing the people, and the community is thus bound to see that the parties perform their duty. Finally, disputes when they arise are referred to arbitration, and forms of process are prescribed by the magistrates. Of the forms of action known to the oldest Roman law, one was a request that the magistrate would appoint an arbitrator; another took the form of a solemn wager, each party depositing a stake which was forfeited if he failed to prove his case. On the analogy of this action by wager was framed the *condictio*, a remedy which seems to have been introduced in the interest of creditors and the money-lending class. There were also forms of execution, by which a creditor could seize his debtor's property and hold it as a pledge, or lay hands on the debtor himself and bring him before the prætor. If the debtor did not discharge or formally contest his liability, the creditor might take him away and detain him in custody; after the lapse of a prescribed time the debtor might be sold into slavery or put to death. These early forms of process were superseded by an improved system, under which cases were sent by a magistrate to a private arbitrator, each case being reduced to a *formula*, in which the issue to be tried was exactly set forth. Cases not suited for arbitration were tried by the magistrate himself; by the imperial legislation arbitrators were almost altogether dispensed with, and all questions of law and fact were decided by the judges.

When the Roman empire was broken up, the nations of Europe framed for themselves those laws which are generally described as the feudal system. Feudalism, as Sir H. Maine points out, combines the surviving forms of Roman law with the customs of the barbaric tribes which overran the empire, and with the Christian sentiment which bound men together by the tie of mutual service. The object of the whole system was to fix the social order by defining each man's duties, and by connecting these duties as far as possible with the tenure of land. The defects of the system were that it left too little room for individual enterprise, and that, by making each man look only to his immediate superior, it strengthened small local powers at the expense of national governments. With the revival of learning and the Reformation there came a demand for greater liberty, and about the same time the renewed study of Roman law directly and powerfully influenced the laws of continental nations; but the feudal customs held their ground until, in the 18th century, political writers began to speculate on the possibility of framing laws of a more simple and rational character, based on general notions of justice and humanity. It was almost taken for granted that social inequalities and abuses were due to bad laws; philosophers drew up ideal codes, and sovereigns, like Frederick the Great, Joseph II., and Catherine of Russia, busied themselves with large schemes of legislation. In France, the Revolution swept away old institutions; the Convention began, and Napoleon carried through the work of providing the people with a new system of laws. There are, of course, infinite differences of detail in the laws of modern states, but in all of them we find the distinctions, classifications, and expedients of the Roman law, adapted to the existing condition of society. It is, therefore, not surprising that socialist writers should endeavour to break down the rigid legal ideas which the modern world has derived from the Corpus Juris. To the socialist, property does not seem to fall into the domain of private rights; he regards it as forming part of a common social stock; he will not permit contracts to be rigidly enforced, for to him a contract is only an arrangement between individuals, to be revised or set aside if the general interest seems to require it.

The history of our own law possesses a peculiar importance. Though deeply indebted to the Roman jurists, English lawyers never accepted the Corpus Juris as an authoritative text-book; they worked out a system of their own on the basis of the common law, *i.e.* of the custom common to the whole kingdom. English customary law was never codified, in whole or in part; it was handed down in the form of an unwritten tradition, of which the freemen themselves, assembled in their local courts, were the interpreters and the guardians. When the king's judges began to go circuit, administering justice in every part of the country, their decisions were accepted as the most complete expression of the common law. In applying legal rules to land, the judges began by expounding the feudal tenures with a subtlety which savours of the logic of the schoolmen; but their bias was in favour of free alienation; they invented or permitted devices by which entails were barred, and settlements brought within strict limits. The tendency towards freedom of disposition was also apparent even in our early legislation, and the chancellor, in the exercise of his equitable jurisdiction, did much to enlarge the power of an owner to deal with land in the way of commerce. Feudal restraints have now been almost entirely removed; the modern law gives to an owner in fee simple all the rights enjoyed by the *dominus* of Roman law. But the transfer of land is beset with difficulties; legislation has removed many of the subtleties of the old law, but the statute-law is so voluminous and complicated that conveyancing is still an art reverenced by practitioners and little understood by the general public. The acts passed in England and Ireland for the benefit of tenants and labourers, represent the result of efforts to combine some of the ideas of social democracy with the rigid notions of individual ownership which commended themselves to the judgment of legal experts. Of those who are most active in promoting changes in the land laws, some would be content with "free trade in land"; others again would nationalise or municipalise the land, with a view to having it managed for the general good, on principles inconsistent with individual ownership and freedom of disposition. Political discussion is much embarrassed by the obscurity of the subject; the economist or the legislator who resorts to legal treatises for information is bewildered and sometimes misled by the technical character of the language employed.

English law has always professed to favour trade; but the trade of old time was carried on under the narrow regulations which were rendered necessary by the privileges of corporations and companies. Even in the 18th century mercantile law was almost undeveloped; in the early editions of Blackstone's *Commentaries* only a few pages here and there are given to the subject. Lord Mansfield was then beginning the long series of his decisions, applying the principles which he derived from his study of Roman and English law to the business of a great and rapidly advancing commercial nation. Since his time, every species of contract and security has been made the subject of prolonged and repeated legal discussion; it would almost be possible to write a history of English commerce from the law

reports alone. Freedom of contract has been the avowed policy of the courts; the law leaves men free to dispose of their property and services at their own discretion, and compels them to carry out the bargains which they choose to make. But all private bargains are controlled by public policy; the law will not permit, for example, a wager to be made in the guise of a contract of insurance; and agents have often been forbidden to plead mercantile usages which would enable them to make profit of their agency without the knowledge of their principals. The policy of the common law would not permit partners in a concern to limit their liability; but this principle has been departed from in modern legislation relating to joint stock companies. In studying these and other topics belonging to mercantile law, we perceive that rules of law are not the arbitrary invention of legislators or judges; they arise naturally out of the usages and transactions of ordinary life. Some difficult problems are suggested to the jurist by the conditions of modern commerce. Free trade and open competition lower the standard of profit, and capitalists form trusts and syndicates with a view to obtaining the control of great markets: is it necessary or desirable that the law should limit their freedom of action? Trade unions claim to dictate terms to employers and labourers: where shall we draw the line between lawful and unlawful combination? These are legal questions, but they are not to be solved by the application of any legal formula: the law merely gives an authoritative form to the notions of justice and expediency which prevail in the community at large.

[The history of law may be studied in *Ancient Law* and other works of Sir H. Maine; for the legal analysis of the ideas of property, contract, etc., see Holland's *Jurisprudence*, and works of Austin and others there cited. Roman law is set forth in the *Corpus Juris Civilis* and in the numerous commentaries thereon; a compendious view is given in Colquhoun's *Summary of the Civil Law*. For the laws of modern European nations, reference may be made to Roger et Sorel, *Codes et Lois Usuelles*.—Stobbe, *Handbuch des Deutschen Privatrechts*, etc. English law is expounded in Blackstone's *Commentaries*,—Smith's *Mercantile Law*; for the rules relating to bills of exchange, sale of goods, and bankruptcy, the works of Judge Chalmers may be consulted with advantage. The Anglo-Indian Codes (edited by Mr. Whitley Stokes) contains a compendious statement of the chief rules of English law relating to contracts, etc.; these rules apply to the natives of India if, and in so far as, their occupations bring them within the circle of British civilisation. A native merchant at Calcutta frames his contracts according to British law, while the peasant cultivator's rights are determined by the custom of his village. Lord Mansfield's most famous judgments may be found in Smith's *Leading Cases*; see especially Carter *v.* Boehm (insurance), and Miller *v.* Race (property in bank-notes), and observe the use made by an English judge of the maxims of the civil law. Lassalle's *System der Erworbenen Rechte* is an interesting study of Roman law by a jurist who became one of the leaders of socialism.] T. R.

CIVIL LIST. The arrangement by which an amount was set apart under this head for the ordinary service of the establishments of the royal household and other expenses of the crown dates from the Restoration (1660). The hereditary revenues arising from the crown lands, and certain minor taxes, were appropriated for this purpose, the amount being about £680,000 a year (temp. Will. III.) From this the incomes of the lord chancellor, the judges, ambassadors at foreign courts were defrayed, together with the pensions granted by the monarch as well as his personal expenses. This arrangement, which was open to many abuses, lasted to the end of the reign of Geo. IV. When William IV. ascended the throne, a select committee of the House of Commons was appointed to inquire into the matter, and resolved that it was expedient that the civil list should be applied only to such expenses as affect the dignity and state of the crown and the proper maintenance of the royal household, and that many expenses which up to that date had been included in it, and had no immediate connection with these objects—which were really part of the expenses of the civil government of the state, ought to be removed from the civil list and placed under the cognisance and constant control of parliament. These charges were therefore transferred to the Consolidated Fund (*q.v.*) and the civil list established mainly on its present footing; some pensions, however, were included in it.

According to Parliamentary Paper 22, Session 1837,—being the report from the select committee of the House of Commons, appointed to inquire into the accounts of income and expenditure of the civil list, from 1st January 1831 to 31st December 1836; with an estimate of the probable future charge of the civil list of Her Majesty,—the civil list of Will. IV. was apportioned for the following purposes:

1st Class	Privy Purse . .	£110,000
2d Class	Salaries of the several Departments of the Royal Household, and Superannuation and Retired Allowances . . .	130,300
3d Class	Tradesmen's Bills .	171,500
4th Class	Royal Bounty, Special and Secret Service .	23,200
5th Class	Pensions . . .	75,000
		£510,000

The report proceeds to state that, in considering an estimate for the future civil list of the sovereign, the committee had been guided,

to a considerable extent, by the expenditure during the late reign. The payments proposed were divided under five heads described as below.

Class I

The privy purse of the sovereign has been for upwards of half a century (now more than a century), fixed at £60,000. During the late reign (Will. IV.), there being a queen consort, a further sum of £50,000 was allotted to this class. Under existing circumstances, your committee recommend that an annual sum of £60,000 be provided for this branch of the royal expenditure.

Class II

The second class comprehends the salaries of the great officers of state, those of the officers and menial servants of the royal household, and the superannuation and retired allowances payable to persons of the latter class. The committee, concurring in the opinion expressed in the report of 1831, "that it was not consistent with the respect due to her Majesty to scrutinise the details of her domestic household," have not undertaken any minute investigation into that branch of the subject; but they have received, as already stated, a very full analysis of the whole of this branch of expenditure.

The principal officers of state in attendance on the sovereign were the lord steward, lord chamberlain, master of the horse, and groom of the stole. It was not proposed to fill up the office of groom of the stole, or to create any analogous office in the household of Her Majesty. It was also proposed to reduce the number of lords-in-waiting from twelve to eight, and of grooms-in-waiting to eight from thirteen. The consolidation, when a vacancy should arise, of certain other offices was recommended. In considering the amount to be recommended for this class, your committee feel it their duty to call the attention of the house to the fact that no application is now made to parliament for the grant of pensions for the servants of the late king. With these explanations, your committee recommend the estimate of £131,260 for the second class of the civil list.

Class III

Considering the disbursements which have taken place in the late reign under the head of bills of tradesmen, your committee recommend the proposed estimate of £172,500 for this branch of the royal expenditure.

Class IV

The fourth class of the civil list of his late Majesty included the following heads:—

Royal Bounty	£9,000
Home Secret Service . . .	10,000
Alms and Charity . . .	4,200
	£23,200

After much consideration, your committee have determined to recommend that the sum of £10,000, now charged on the civil list for secret service, may be transferred to the consolidated fund by act of parliament, to be applied to the same purposes, and under the same authority, as heretofore.

The provision for this class will consequently be reduced, as a charge on the civil list, to £13,200.

Class V

The committee approached the consideration of the pensions charged on the fifth class of the civil list with a full sense of the attention which the subject has exacted. Your committee refer to the following passage in the report of 1831:—"The house must recollect, that the principle on which the sum is allotted by parliament for the purpose of the civil list is as a payment for the personal advantage of the sovereign, and for the support of the dignity of the crown, in lieu of the hereditary revenue which at the commencement of each reign the sovereign sacrifices for the benefit of the public: some provision ought in all cases to be made for such payments, as it might be presumed the sovereign would have been desirous of making had he remained in possession of the hereditary revenue. That one class of such payments would be pensions to those of his subjects whom he wished to favour cannot be doubted." In conformity with this opinion, your committee recommend that the provision for the grant of pensions should continue to form a part of the civil list of Her Majesty.

But in order to guard against the supposition that an enactment founded on this principle should in any degree interfere with the inquiry into pensions, of which notice has been given in the House of Commons (if it appears fitting that such inquiry should be instituted), it is the opinion of your committee that, in place of granting a sum of £75,000 for civil list pensions, Her Majesty should be empowered to grant in every year new pensions on the civil list to the amount of £1200; these pensions to be granted in strict conformity with the following resolution of the House of Commons, passe' on the 18th of February 1834:

"That it is the bounden duty of the responsible advisers of the crown to recommend to His Majesty for grants of pensions on the civil list, such persons only as have just claims on the royal beneficence, or who, by their personal services to the crown, by the performance of duties to the public, or by their useful discoveries in science, and attainments in literature and the arts, have merited the gracious consideration of their sovereign, and the gratitude of their country."

Your committee recommend that this resolution should be engrafted in the Civil List Act, and that annual returns of the pensions granted, and the names of the several parties,

should be laid before Parliament. The civil list of Queen Victoria was fixed accordingly at £385,000. Arrangements were also made as the Queen's children grew up and for other members of the Royal Family. At the accession of King Edward VII. the civil list was fixed at the following amount:—

Class I	Privy Purse	£110,000
Class II	Retired Allowances, Salaries, and Wages	125,800
Class III	Expenses of Household	193,000
Class IV	Works	20,000
Class V	Royal Bounty, Alms, and Special Services	13,200
	Unappropriated Monies	8,000
		£470,000

At the accession of King George V., 1910, the same amount was passed. On the death of King Edward VII., the Queen Dowager became entitled to an annuity of £70,000 provided under §5 of the Civil List Act. The Prince of Wales being entitled to the revenues of the Duchy of Cornwall receives no further provision, but on his marriage, £10,000 a year is assigned to the Princess of Wales to be increased to £30,000 should she survive the Prince. Under the Prince of Wales's Children Act (1889) provision was made for annuities of £10,000 to each of the King's younger sons on reaching the age of 21, with an increase of £15,000 a year on his marrying, and an annuity of £6000 a year to each daughter on her attaining her majority or marrying. Further charges on the Consolidated Fund are the payments in each year of the Civil List Pensions to the extent of £1200 a year, and a maximum provision of £18,000 a year to meet pensions to former members of the households of King Edward VII. and of Queen Victoria.

The comparison between the charge for the late and the present reigns stood as follows:—

	1901	1910
Civil List	£470,000	£470,000
Pensions transferred to Consolidated Fund	25,000	18,000
Provision for other members of Royal Family	126,000	146,000
	£621,000	£634,000

CIVILISATION. Ricardo pointed out (*Principles*, ch. v.) that the natural price of labour varies greatly, and "essentially depends on the habits and customs of the people." The closer political and industrial communication established between civilised, half-civilised, and uncivilised peoples since Ricardo's time has confirmed the truth of this observation and shown the difficulty of applying many economic maxims universally when local conditions vary greatly. The industrial life of each people harmonises with its environment of political structure, customary morality, and current intelligence. Any observed type of industrial organism is greatly determined by the conditions of civilisation existing there and then, both in regard to the wealth of the community as a whole and the economic relationships between its parts. The family, in its various forms, is the one constant social element, and offers the best basis for economic observations (F Le Play, *Les Ouvriers Européens*, I.)

1. It is at first sight natural to ascribe the poverty of any tribe to the physical conditions under which they live, such as the barrenness of the soil, or the rigour of the climate. Such hindrances set definite limits to progress at any given time, but every increase in intelligence or social improvement removes them farther back; they form a relative, not an absolute check to the increase of prosperity. The success of the Dutch in forming a rich community despite disadvantages of every kind, shows how skill and energy may overcome nature and overpass limits that would otherwise prove insuperable barriers. The example of Sweden may likewise be cited. The use to which the wealth of a people is put depends on the current view of utility or enjoyment; it may be spent in warfare, embellishment, or extravagance; it may be devoted to improving the country and the condition of the people. Unless some portion is carefully devoted to these latter purposes, a civilisation will be short-lived, however brilliant it may be. The rapid decline of some Eastern empires and of the glories of Athens may be thus explained; the Romans, on the other hand, devoted much energy to developing the resources of their empire, and gave it more stability.

2. Though the chief economic activity of societies of men has always had the same object of securing sustenance, clothing, and shelter, they have been, and are, grouped for these purposes in different ways. We may distinguish four types: (i) In the early village community (Maine's *Village Community*, Laveleye, *Primitive Property*, see AGRICULTURAL COMMUNITY) the work is undertaken collectively, and wealth forms a common fund. Unwritten custom, administered by patriarchal or elected authority is supreme; and individual energy is devoted to the common good of a small self-dependent group. (ii) In municipal societies, like the mediæval cities, the inhabitants are organised according to their callings in separate guilds; the status in life of each inhabitant, generally speaking, is determined by the standing of the guild, on the regulations of which the conditions for labour and rate of pay depend. The individual cannot rise out of his sphere in life, and to hold a good position in his own guild is the chief object of ambition (see GILD). (iii) By national organisation the central government may direct the economic energies of a whole nation, so that each village and each town shall contribute as much as possible to the maintenance of national power. Colbert may be specified in this connection, and the various economic systems which were criticised so effectively by Adam Smith (*Wealth of Nations*, iv., see COMMERCIAL SYSTEM). (iv) In modern society each individual is left free, so far as possible, to pursue his own greatest ad-

vantage, and, for this purpose, employs his labour or his capital in any direction which seems likely to be profitable, without being hampered by family ties and local regulations; or he unites in voluntary associations where it appears that he can reap a greater measure of personal advantage (see CO-OPERATION; COMPANIES).

It may be noticed in regard to the distinct types of economic organisation found under different civilisations, that the higher forms are extended over very large areas and give much free play for individual energy. Working on a large scale, while they are very complicated in their details, they are far more effective for the purposes of providing food, clothing, and shelter than the simpler machinery found in less developed societies. Again, the history of any one great civilisation shows how the industrial organisms of the simpler type have been in turn displaced by more effective institutions; though fragments of the old may remain, cramped probably by regulations that have become unwise since they are out of date. Hence we may find in an old society some arrangements which appear to be wholly at variance with modern modes of thought, which only become intelligible when understood to be survivals of institutions once really important, though now mere anachronisms. While much interest attaches to the study and working of any economic system, the higher civilisations with their more effective arrangements for organisation offer the best field for investigating the causes which affect the growth and maintenance of national wealth. W. C.

CLARKSON, THOMAS (born 1760, died 1846), a leader in the crusade against the slave-trade, the evils of which he first realised when competing at Cambridge, 1785, for a prize to be given for the best essay on the subject *Anne liceat invitos in servitutem dare*. Clarkson won the prize, and published his essay, translated and enlarged, 1786 (2d ed. 1788). In a subsequent essay *On the impolicy of the African slave trade*, 1788, he argued that the traffic which he had proved to be iniquitous was also unprofitable. Among many publications on the same subject may be noticed *History of . . . the Abolition of the African Slave Trade . . .*, 1808. In a new edition of this work, 1839, there is a preface describing Clarkson's later labours in the cause of the slave. To the second series of his philanthropic efforts belong *Thoughts on the Necessity of Improving the Condition of the Slaves in the British Colonies with a View to their Ultimate Emancipation . . .*, 1823; and *The cries of Africa to the Inhabitants of Europe . . .* (?1822). Clarkson also wrote, *Not a labourer wanted for Jamaica*, to which is added an account of the newly erected villages by the peasantry and their beneficial results, 1842; and *The Grievances of our Mercantile Seamen a National and Crying Evil*, 1845 (see ABOLITIONIST).

[*Biographical Sketch of Thomas Clarkson*, by Thomas Taylor, 1839.—*Sketch of the Life of Thomas Clarkson*, 1876.—Clarkson, William, author of *An Inquiry into the Cause of the Increase of Pauperism and Poor Rates, with a remedy for the same and a Proposition for Equalizing the Rates throughout England and Wales* (1815)]. F. Y. E.

CLASSICAL ECONOMISTS. This name has been applied to Adam Smith and his immediate successors, Malthus, Ricardo, James Mill, M'Culloch, and Senior, and, less often, to the French physiocrats.

In keeping with the Latin derivation of "classical," and with the use of the term "classical authors," the name might simply denote economic writers of the first rank who have left models which all others must follow. A less complimentary interpretation is given by Professor Brentano, who compares classical economics to classical sculpture, where, he says, personal peculiarities are ignored in favour of broad general human characteristics, and of an "abstract man" without scars or wrinkles. Economists, he says, belong to the classical school when they reason deductively from the assumption of an "abstract (economic) man." The justice of this description need not be discussed here. See DEDUCTIVE METHOD; HISTORICAL SCHOOL; M'CULLOCH; MALTHUS; MILL, JAMES; PHYSIOCRATS; RICARDO.

[Brentano (Prof. L.), *Die classische Nationalökonomie*, Leipzig, 1888.—Böhm-Bawerk (Prof. E.), "Review of Brentano's Class. Nationalökonomie."—*Göttingische Gelehrte Anzeigen*, June 1889.—Dietzel (Prof. H.) "Die classische Werth-theorie," *Jahrb. für Nat. ök. und Statistik*, 21st June 1890 cp. paper by the same writer, *ibid.* May 1891.—Gide (Prof. Ch.) *Principles of Political Economy*, pp. 16-20, Eng. Transl., Heath & Co., New York, and Isbister, London, 1891.] J. B.

CLASSIFICATION is described by Mill (*Logic*, vol. ii. p. 258, 4th ed., bk. iv. c. vii.) as "a contrivance for the best possible ordering of the ideas of objects in our minds; for causing the ideas to accompany or succeed one another in such a way as shall give us the greatest command over our knowledge already acquired, and lead most directly to the acquisition of more." From this description we may conclude that classification is more than a matter of neatness or convenience. We can classify things correctly only in so far as we can see them in their true relations, and to see them in their true relations is nothing less than to know their true nature. "The value of classification," says Jevons (*Principles of Science*, vol. ii. p. 345), "is co-extensive with the value of science and general reasoning." Or, as the same writer puts it elsewhere, "Science can extend only so far as the power of accurate classification extends," p. 421. It is not, therefore, surprising

that the theory of classification should have been discussed at length by the most eminent writers upon scientific method, or that success in classification should be one of the distinguishing marks of scientific genius.

Classifications have frequently been distinguished as natural and artificial, or as they might better be termed, scientific and arbitrary. In artificial classifications "some characters arbitrarily chosen serve to determine the place of each object; we abstract all other characters, and the objects are thus found to be brought near to or to be separated from each other often in the most bizarre manner. In natural systems of classification, on the contrary, we employ concurrently all the characters essential to the objects with which we are occupied, discussing the importance of each of them; and the results of this labour are not adopted unless the objects which present the closest analogy are brought most near together" (Ampère quoted by Jevons, *Principles of Science*, vol. ii. p. 351). Or, as Mill puts it in his *Logic* (bk. i. ch. vii., vol. i. p. 137 *et seq.*), some objects are separated from each other by differences of kind, that is to say, by an indefinite and inexhaustible number of particular differences; other classes of objects are separated only by certain specific differences which are not indices of any others.

But too much must not be made of these distinctions. The difference between an artificial and a natural classification is only one of degree. Any classification, however subordinate the differences upon which it is based, tells us something about the nature of the objects classified. The classification which is useless for the purposes of one science may be all-important for the purposes of another science. Thus crystals will be classified by the chemist with reference to their chemical composition, and by the crystallographer with reference to their peculiar crystalline form, and the two classifications will be altogether discrepant with each other. Again, the progress of knowledge has shown that hardly any distinctions of kind are absolute, that indefinite variation, not orderly grouping, is the way of nature, and that scientific precision is to be found not in drawing distinctions between classes, but in tracing the laws of development. Even before the idea of evolution had attained to its present distinctness, it was remarked that in the sciences known *par excellence* as classificatory, the sciences of botany and zoology, classification was based not on definition but on types. In other words it was found that the individual forms of animal or vegetable life clustered themselves around certain types to which few if any conformed with exactness, whilst all were closely akin. But since a type in this sense is but the compendious symbol of a number of nearly related classes, it is clear that a classification by types is either an inaccurate classification or else a classification which has not been fully carried out.

In the moral and political sciences, including political economy, classification is beset with peculiar difficulties and dangers. The most obvious of these lies in the fact that none of these sciences possesses, or is ever likely to possess, a complete scientific vocabulary, the terms of which have the same precise sense for every student, whilst they remain undefaced by loose popular use. Classification is at every step dependent upon nomenclature; and it is only in sciences which, like botany, possess a complete and precise technical nomenclature that classification can be carried out to the utmost extent. But a more serious hindrance to classification is to be found in the nature of the subject-matter of moral and political science. Their subject-matter is far more complex than the subject-matter of botany or zoology. If it be true that practically every individual in the vegetable or animal kingdom embodies a more or less considerable variation from a type, how much more is this true of every human being and of every human institution. Anybody who compares with the classifications of natural science the classifications, say, of feelings or motives in a treatise of psychology, will feel how much less adequate is the latter to the object aimed at by the writer. And in the study of society Mr. Herbert Spencer's *Descriptive Sociology* affords a striking example of the difficulties which beset classification and of the limited advantages to be derived from it. When we look closely into ideas or institutions which at first sight appear very similar, we usually find differences of a momentous nature. This may be exemplified by the well-known hazard in predicting from some instance in the past the working of a new institution which seems to resemble it. It may almost be said that in the sphere of moral and social science the only true kinds are individuals. The most sagacious and suggestive writers upon these topics have shunned elaborate classification as they have shunned the use of highly technical language.

[J. S. Mill, *Logic.*—W. S. Jevons, *Principles of Science.*—J. N. Keynes, *Scope and Method of Political Economy*, pp. 166-8.—K. Menger, *Methode der Socialwissenschaften* (1883), especially Appendix IV. (classification of economic sciences).—K. Menger, *Grundzüge einer Klassifikation der Wirtschaftswissenschaften* (1889).—H. Spencer, *Classification of the Sciences.*—P. Geddes, *Classification of the Sciences.*] F. C. M.

CLAY, Henry, born in Virginia 2d April 1777. After receiving but a poor and elementary education; he became a lawyer and removed to Kentucky, where he entered on a political career of national importance, and three times in his life—in 1824, 1832, and 1844—was a candidate for

the presidency. Although not an author, Clay is noteworthy in economics as intimately associated with the development of the so-called "American system" in the United States, or the policy of protection to manufactures by means of tariff duties, and the liberal encouragement of internal improvements under national authority. In 1806, he became a member of the U.S. Senate, and for nearly forty years, with the exception of brief periods, was a member of this body or of the House of Representatives. His most important speeches bearing upon the subjects of protection and internal improvements are the following: *Manufactures*, 6th April 1810; *Internal Improvements*, 13th March 1818; *Protection to Home Industries*, 26th April 1820; *Internal Improvements*, 16th Jan. 1824; *American Industry*, 30th and 31st March 1824; *Influence of the American System*, 2d, 3d, and 6th Feb. 1832; *Introducing the Compromise Bill*, 12th Feb. 1833; *Support of the Compromise Act*, 25th Feb. 1833; and *On the Tariff*, 1st March 1842. In favour of protection he argued that it was necessary to establish a home market for agriculture, as American power of production was increasing in a ratio four times greater than foreign powers of consumption; that the United States should not permit itself to be a commercial slave; that a well-established system of manufactures promoted political peace with foreign countries; that manufactures would bind the various interests of the country into a closer union. Clay repeatedly insisted in 1820, 1824, and 1832, that the question of protection must be decided in face of the fact that European nations maintained similar systems. "I, too, am a friend to free trade," he said in 1820, "but it must be a free trade of perfect reciprocity." It will be noticed that the arguments referred to are mostly of a political nature; by 1832, Clay advanced more prominently reasons of a more strictly economic character; and then argued that through the tariff of 1824, the commodities which had been protected were cheaper, and that products of agriculture commanded a higher price owing to the creation of a home market. Little was said about the mercantile theory of balance of trade. The advocacy of internal improvements undertaken by the national government in the first third of this century, was due to reasons which would not be appreciated at the present time. Settlements west of the seaboard were scattered, and it was difficult, and in many cases perilous to reach the advance guard of western emigrants. Improvements were urged not only on political but on economic grounds. The agricultural products of Ohio were of little value as long as the only commercial outlet was the Mississippi, reached by the Ohio river. Even Jefferson, who in general with the Republican party favoured the strict construction of the powers of the constitution, yielded to the general demand that the national government should actively assist in building roads and canals and improving rivers. In judging then the position of many public men of the United States at this time in regard to a wide interference of the state in industrial affairs, one must bear in mind the political exigencies due to the fact that it was impossible to secure from the several states harmonious and wise action, necessary for an inter-state route. Clay was one of the founders of the Whig party, and in general acted in harmony with it on political questions. For his speeches on the United States Bank, see the following: *A National Bank*, 1811; *The Bank Charter*, 3d June 1816 (delivered at Lexington, Kentucky); *Veto of the Bank*, 12th June 1832; and for his speeches on the sub-treasury system in which he urged the necessity of convertible paper money, and argued against relying upon the precious metals as the sole currency, see speeches delivered 25th Sept. 1837; 19th Feb. 1838; 20th Jan. 1840. From 1842 till 1849 Clay retired from active political life, although retaining the position of adviser of the Whig party. He died in 1852. For life and works see *Works of Henry Clay*, edited by Calvin Colton, 6 vols., New York, 1863. The last two volumes contain the speeches.

D. R. D.

CLAYTON, DAVID, author of *A Short System of Trade, or an account of what in trade must necessarily be advantageous to the nation, and what must of consequence be detrimental*, London, 1719. "Multitudes of people fully employed in beneficial trades" being advantageous, the importation of foreign manufactured goods is "of consequence detrimental." The writer alludes to "a pamphlet published about two years since, entitled 'A short but thorough search, etc.', which is now again reprinted with some alterations and large additions."

F. Y. E.

CLEARING SYSTEM

Clearing Houses, p. 305; London Bankers' Clearing House, p. 306; Provincial Clearing Houses, p. 307; Foreign Clearing Houses, p. 307; Statistics, p. 309; Other Classes of Clearings, p. 310; Stock Exchange Clearing, p. 310; Beetroot Sugar Association, p. 310; London Produce Clearing, p. 311; Railway Clearing, p. 311; Cotton Clearing, p. 311.

CLEARING HOUSES. The circulation of a bill of exchange, draft, or cheque through several hands accomplishes something more than the settlement of the original transaction out of which it arose. It completes many intermediate business operations by the delivery perhaps of a single document instead of by telling over a quantity of currency several times. It thus effects important economies of currency and of labour. But for the final liquidation of the document there is still required the trouble of presentation, the provision of currency, and the labour of counting this, besides the risk of storing and of carrying it.

In some or all of these points a clearing system carries economy yet further. The principle of the clearing system is payment by "set-off," or the "clearing" off certain claims by counter-presentation of other claims, leaving only a single balance to be settled by actual payment. Economy to this extent may be obtained by the least developed system of clearing, as existing in many towns, where each bank presents to the other banks all drafts which it holds on them without requiring payment at the time, settlement being made subsequently by paying the balances between the cross deliveries. The next advance is the establishment of a clearing house or common place of meeting. By this means presentation may be made to many different members within the compass of a single room, and each of those members will have but the labour of a single journey. A further economy is secured in the settlement by book entry of the final balances resulting from the claims mutually admitted. With this arrangement the use of currency is eliminated from the whole chain of transactions, from the first drawing of a bill or draft to its final payment. The system is effective entirely in proportion to the economy obtained, and our estimate of its value must depend upon (*a*) the completeness of the chain of adjustment; (*b*) the magnitude of amounts discharged; (*c*) the number of drafts presented; (*d*) the number of parties making and receiving presentation; and (*e*) the difficulties of separate presentation, otherwise necessary. Great diversity may exist in the arrangements. It will therefore be desirable to describe the methods adopted at some of the chief clearing houses of the world.

The London Bankers' Clearing House,* established between 1750 and 1770, now includes (1923) ten members, all being bankers, doing cash deposit business in the city. The clearing-room is a large apartment of irregular shape, lighted from the roof. Around the walls and in a double row in the centre are placed desks allotted to each bank, according to the extent of its business. The banks are placed in alphabetical order, so that the clerks can pass around the room and deliver the "charges" without confusion or risk of error. In describing the operations it is necessary to use technical terms and to remember that the "out" and the "in" clearing comprise the same items, having regard to their presentation by one bank and their reception for payment by another. Thus the "out" clearing of each bank, *i.e.* the cheques, etc., for which each bank has to receive payment, becomes part of the "in" clearing of every other bank, *i.e.* the cheques, etc., which every other bank has to pay. The "out" clearing is taken down at the bank offices in sheets or books in separate "charges," according to the bankers drawn upon, whilst the "in" clearing is taken down in the same way at the clearing house by clerks who go there for the purpose.

The clearing for the Metropolitan area opens at 9 A.M. and continues to 10.30. The town clearing then opens, and drafts must be received not later than 11.5. The clerks receiving the "charges" enter the items in their "in" clearing-books, and cast them, agreeing the totals with amounts placed on the back of the last cheque. When this is completed the clerks leave the house, taking the drafts to their respective offices. The total amount of the morning and country delivery must be agreed by each clearer before he leaves the clearing house. The afternoon clearing opens at 2.30 P.M., and continues until 3.50, when the last delivery must be made. The arrangements differ from those of the morning clearing only in the fact that the deliveries are continuous and frequent throughout the afternoon. At 3.50 the doors of the house are closed, and no more drafts can be presented. As soon as the last drafts have been despatched from the banks, the "out" books are cast close and sent down to the house to be agreed with the "in" books of the other banks. Differences in adding the figures together are rectified by the bank in error, but differences in items are altered by the "out" clearers to agree with the "in" clearers. Subsequently the difference may be reclaimed by production of the draft. Drafts refused payment are returned at any time during the afternoon by inclusion in the "out" charges to the banks by whom they were presented. "Returns" are also received at the house after the close of the clearing, and up to 5.0 P.M. The totals having been agreed, the balance between the "out" and "in" amounts is struck by each bank with every other one, and the last "returns" are charged and allowed on either side. All these balances then form items in a general balance-sheet, which is prepared by the head clearer of each bank, and shows at foot the final balance which his bank has either to pay or receive. This balance is settled with the clearing house by means of transfers made at the Bank of England between the clearing house account and those of the various banks. Of course, if the final balance-sheets are all correctly made out, the total of the transfers to the credit of the clearing house will exactly equal the total of the amounts transferred from that account to those of the creditor banks. Errors are charged or credited to the banks in the next day's clearing.

Country Cheque Clearing.—Besides the clearing between the city banks, a clearing for drafts drawn upon banks throughout England and Wales is held daily at the London clearing house. In economy of labour this is the most complete example of the advantages of the system, its net result being, shortly, this—that every country bank can make presentation of any number of cheques, drawn on any of the

country banking offices, by sending one letter to its London agent; it can receive payment therefor by one line in its London banking account, and can in the same manner make due payment for any number of cheques drawn upon itself. The clearing is limited to cheques or drafts on demand, and by the boundaries of England and Wales, being one day's post from London. With only the most insignificant exceptions it embraces every bank outside the metropolis, from Land's End to the Tweed.

The particulars of the arrangement are as follows. Every country bank has as London agent one of the London clearing banks, which conducts on its behalf the clearing now referred to, as well as other business that it may require to do in London. Each country bank makes up daily all the cheques drawn on other country banks which it has received, and forwards them by the evening mail to its London agent, accompanying the parcel with a detailed list of the items. The London bank, receiving them on the following morning, after examination of the parcel, sorts the cheques according to order of the various clearing banks, as agents of the banks drawn upon, charging them in "out" clearing books, and delivering them at the clearing house. The meeting for this purpose is held daily from 10.30 A.M. till 12.30 P.M., the cheques being entered at the house in "in" clearing books, and the totals agreed in the same manner as in the town clearing. No balances are struck until the day next but one, when the head clearer of each bank prepares a balance-sheet, composed of the various balances he has to pay or to receive, on account of the cheques exchanged two days before. The final balance shown between his own bank and the clearing house is carried forward as an item in the general balance-sheet prepared at the close of the day's town clearing. On the first day, when the exchanges are made, the cheques received by each bank as "in" clearing are taken to the office and sorted afresh in order of the country banks on which they are drawn. They are then entered in books, and sent down by the evening's post, accompanied by lists. The country banks, receiving them the next morning, have the whole day for examination, and then, in the daily letter to their London agents, advise them to debit their account with the total. On receipt of this advice the London banks are able to make payment at the clearing house as already described. Unpaid cheques are returned through the post by the bank refusing them, direct to the banker whose name is stamped across them, and the particulars are communicated (technically "advised") to the London agents, who claim the amounts from the agents of the banks to which they have been returned.

In the Report of the London Bankers' Clearing House for the year 1923 the total amount of the cheques cleared during that year through the country cheque clearing is given as £2,810,654,000, or an average daily clearing of £9,155,200. In the boom year of 1920 the total for the year was £4,072,220,000. Thus the economy of currency is considerable, but the economy of labour is even greater, and still more important is the expansion in the business of the country bankers rendered possible by it, as it enables them to offer their customers facilities for the negotiability of their cheques equal to those enjoyed by customers of London Banks. [See CLEARING HOUSE, App.]

PROVINCIAL CLEARING HOUSES. There are clearing houses or systems at Manchester, Liverpool, Birmingham, Newcastle, Leeds, Sheffield, Bristol, Leicester, Nottingham, and Hull. The aggregate amount dealt with by these clearing houses was £507,600,000 in 1898, £824,000,000 in 1912, and £1,722,655,000 in 1923. In several instances the clearing includes cheques drawn not only on the members actually presenting, but also on their branches within a specified distance of the centre. At Sheffield the local clearing circle has a radius of some twenty-five miles. There are also various degrees of economy and convenience in the manner of paying the balances due. Sometimes they are settled by bank notes, sometimes by transfers between their accounts at a branch of the Bank of England, or by payments made and received through the London agents. In Scotland there are clearing houses at Edinburgh, Glasgow, Aberdeen, Dundee, Greenock, Inverness, Leith, Paisley, Arbroath, Dunfermline, Forres, Montrose, Oban, Perth, Stirling, Falkirk, and Kirkcaldy. The arrangements generally include note exchanges, and also a highly organised system of clearing for drafts on any or all of the numerous branches. In Ireland the only clearing houses are at Dublin and Belfast. In Canada there are clearings at Montreal, Toronto, and Halifax; in Australia, at Melbourne and Sydney.

FOREIGN CLEARING HOUSES. In the United States great use has been made of the clearing system. Although not introduced there till 1853, when the New York Clearing House was established, the number of such institutions, and the extent of their transactions, already exceed those of Great Britain. This is due not only to the general readiness with which the Americans avail themselves of every economic arrangement, but more particularly to the peculiarity of their banking system. Branch banking has not developed in America as in Europe, and the tendency in this direction has been discouraged by the Federal Reserve Board. The deposits of the 8249 National Banks were over £3,264,000,000 in 1922, whilst the whole banking deposits of the country, about £8,224,000,000, are divided among 30,389 banks. (*Report*, Comptroller of the Currency,

1922.) Each bank being a separate institution, there is little of that internal clearing performed in every large bank by the cancellation of drafts appearing on both sides of the books. Thus the clearing house becomes a necessity, even where the total amount of banking business is comparatively small. In 1890 there were 60 clearing houses operating in the United States; in 1922, 204 including New York. All these institutions have arrangements much alike, conforming generally to those of the New York Clearing House, where the method of transacting business differs entirely from that adopted in London. The New York Clearing House includes 43 members, whose representatives meet twice a day, at 9 and at 10 A.M. Each bank sends two representatives, a clerk and a messenger, who arrive before the hour named, at which time every clerk is required to be at his appointed desk, with his messenger standing outside it. At a signal from the manager, who is stationed in an elevated desk overlooking the room, every messenger moves forward to the desk next his own and presents to the clerk there a sealed envelope containing the cheques drawn on the bank for which that clerk acts, with a slip pasted outside showing the particulars of the items and their total amount. He presents also a list printed with the names of all the banks, and having the amount presented entered against each of them. The clerk receiving the envelope signs for the amount and returns the list to the messenger, who goes to the next desk in the same manner, and so on until he has made the circuit of the room, and delivered all his envelopes. The whole operation of exchange is thus performed in about ten minutes. The clerks receiving the envelopes, without opening them, enter the amounts on printed lists, and make up the total, which, compared with the total of the list of envelopes delivered by their own messengers, gives a balance to be paid to, or received from, the clearing house. The messengers then take back to their respective offices the envelopes received, and the clerks remain behind to report their amounts to the managers, and to agree on the balance due. This done, the clerks leave the house; the whole clearing having occupied probably less than one hour. The debtor banks have then to pay over to the clearing house, by 1 P.M., the balances due from them, after which the creditor banks can receive, at the same place, the balances in their favour. Neither in New York nor in any city in the Union is there any bank occupying a position similar to that of the Bank of England, and therefore the balances cannot be paid by transfer. Formerly they were paid in legal-tender notes, or in gold coin, but this entailed a vast amount of labour. On one day, in 1879, the value of coin passing through the clearing house was £1,660,000, and its weight was about 15½ tons. Besides cost of time and labour involved in handling the coin, much loss was suffered by abrasion. Subsequently the clearing banks made a deposit of gold in the vaults belonging to one of their number, and certificates were issued against it for $1000, $5000, and $10,000 each, which were passed in payment of balances. Recently this plan has been abandoned, and payment is made, as to the chief amounts, in certificates issued by the United States Treasury for gold coin deposited there, and as to lesser amounts, in legal-tender notes and minor coins.

Until recent years there was no system similar to that of our country cheque clearing, and the inconveniences suffered by the banks in the United States for want of such a system afforded a good illustration of the advantages derived from it here. In the absence of due facilities the banks had a custom of forwarding cheques drawn on one town to any town in its vicinity to which they might be making remittance, on the chance of the bank there having to remit to the town on which the cheque was drawn. Frequently, however, this turned out not to be the case, and the cheque was sent backwards and forwards between one town and another, sometimes remaining out for many days before finally presented, and, if unpaid, taking as many days more in return. The enormous distances comprised within the limits of the Union would render it difficult, if not impossible, to arrange for a general system of clearing through a single centre. The course of development, therefore, has been in the direction of the establishment of local clearing circles.

On the continent of Europe, the entirely different degree in which banking has progressed has tended greatly to restrict the use of clearing houses. Although the earliest system of clearing of which anything is known was that which existed for some centuries at Lyons, France has even now made but little progress towards adopting this economy. The Paris Chamber of Compensation, established 1872, is the only one in the country, and its transactions are still small. Several causes have led to this, chief among which is the small extent to which the daily transactions of trade are carried out through banks. Cheques were quite unknown before 1859, and their use has not even now become general. Business is chiefly carried on by means of notes, coin, and small bills, the latter being generally payable at the offices or residences of the drawees. On one day, 30th November 1922, the Bank of France collected in Paris 332,191 bills, payable at 79,183 dwellings, the total value being Frs. 345,426,000. The Bank of France, through which the greater part of the banking operations of the country is carried on, had in 1922, 321,900 current accounts at Paris and at the branches and auxiliary offices of the Bank. The need for a clearing house is still further lessened by the fact that the greater

part of such business is carried on through three banks only, namely the Bank of France, the Société Générale, and the Crédit Lyonnais. As these establishments have between them about 2000 branches, they are able to settle a large proportion of their transactions within their own offices. The Bank of France has special arrangements for this purpose, and the amount annually "cleared" within its walls is seven or eight times as large as the total passing through the Chambre de Compensation. A still greater amount is probably that which is affected by the arrangement under which the operations of the Bourse, not only in Paris, but in the other chief cities, are liquidated within the Bourse itself by means of the "Compagnie des Agents de Change de Paris." These remarks apply with little variation to the banking arrangements in the other countries of Europe. Where there is no general use of cheques there is no great necessity for a clearing house, and throughout the continent a "bank" exists more as an establishment of credit than as a medium of currency. In Berlin, the clearing was established by the Reichsbank so recently as 1884, as part of a general movement to extend the use of cheques. There, also, the transactions of the stock exchange are, and have been since 1871, liquidated by "set-off" in a separate institution, the Bank des Berliner Cassen-Vereines. A clearing house exists at Hamburg, continuing arrangements long carried on by the Bank of Hamburg; and clearings are also conducted by 24 branches of the Reichsbank. A clearing house was established in Brussels in 1908, and has greatly assisted business in Belgium. At Vienna, arrangements which previously existed among several banks, were consolidated, in 1872, into a regular clearing house. Its operations have not been very considerable, nor have they shown any tendency to increase. The operations of the Bourse are liquidated separately by the Wiener Giro- und Cassen-Vereine. In 1881 the amounts so liquidated were fourteen times as great as those passed through the clearing house. In Italy, thirteen clearing houses were established by royal decree in 1881, to assist the resumption of specie payments, but the development of banking there did not require their continuance, and only those of Rome, Milan, Florence, Genoa, Catania, and Bologna still exist, besides that at Leghorn, established long previously.

STATISTICS. Full tables of the amounts passing through the various clearing houses of the world cannot be given here, but a few of the most important figures will show the extent to which currency at least is economised by the system. Some considerations should always be borne in mind in connection with tables of clearings which are otherwise likely to mislead. The amounts cleared at one time or place, as compared with other times or places, do not directly indicate the relative extent of trade or of banking development. They may vary with (1) the number of separate members included in the clearing; (2) the proportion they bear to the whole banking system of the place; (3) the existence there of other institutions having similar objects; (4) the manner in which returns are made. In connection with point 1, it is evident that the greater the number of banks in the clearing the greater will be the proportion of their whole transactions passing through the house. The larger any individual business is, the larger will be the proportion of its transactions cancelled in its own office. The same applies to point 2, because banks outside the clearing, though they may clear through members of it, have still a large number of transactions settled internally, and thus removed from view. This also applies with still greater force to banks with many branches. Point 3, the extent to which arrangements are in existence for liquidating separately any particular class of financial engagements, must obviously materially affect the amounts cleared. The remarks already made on this subject as to the clearings at Paris, Vienna, and Berlin sufficiently show its importance. On the other hand, the absence of special settling days for bargains between members of the Stock Board in New York tended to increase the amounts passing through the bankers' clearing. Point 4, the totals of one side only are usually quoted, but in the earlier returns of some American clearings, and in some continental clearings at the present time, both cheques brought in and those taken away are included, thus doubling the figures.

CLEARINGS.

		Millions.
London—Annual Average	1868-1877	£4,941
" " "	1878-1887	5,747
" " "	1888-1890	7,454
" " "	1891-1900	7,501
" " "	1901-1910	11,831
" " "	year 1912	15,962
Manchester	" 1923	761
Liverpool	" 1923	450
Birmingham	" 1923	116
Newcastle-on-Tyne	" 1923	104
New York	" 1923	42,476
203 Other Clearing Houses, U.S.A.	" 1922	33,413

With regard to the proportion between amounts cleared and balances paid over in settlement, their relation will depend generally upon the number of members in the "clearing," but it may also be affected by other circumstances. Thus the balances paid in the London Clearing House are very largely increased by the Bank of England clearing on one side only, the debtor balances of all the other banks being thus increased to the extent of the whole of their claims upon the Bank, which are by the present arrangement paid in as "credits" at the Bank

counter. In point of economy of currency, however, this is immaterial as the final settlement is made by book entry.

Other Classes of Clearings. The principles of clearing have been applied, with more or less completeness and success, to the settlement of transactions in commodities other than money, and some examples of those arrangements must now be briefly referred to. Whilst the clearing houses described above have differed only in the degree of their organisation, institutions for dealing with commodities are capable of variation in another direction. They may deal with either or both of two terms instead of with the single term, money. A number of bargains in any movable property may be settled by the principle of "set-off," either as to delivery of the property or as to payment of its value, or as to both of these points. One feature, however, is common to all clearings, and that is uniformity of the article dealt in. A clearing can only be held under these circumstances, as it is the essence of the principle that the last buyer or receiver is equally satisfied by delivery from the first seller as he would be by delivery from the person of whom he actually bought.

These conditions are present in bargains in stocks and shares, and it is in connection with stock transactions that the most extended application of the clearing system to dealings other than those in money has been made.

The Stock Exchange Clearing has been in operation in London since 1874, and though its use is neither obligatory nor universal among the members of the stock exchange, it has undoubtedly effected a very material saving of labour. Nothing whatever is known of the amounts settled by its means, although, no doubt, they are already very considerable, but it cannot be said to effect any economy in currency, as the transactions liquidated there would otherwise be settled by cheques. Still, those amounts, whatever they may be, are so much withdrawn from the returns of the Bankers' Clearing House.

The clearing is held within the precincts of the stock exchange, and is under the sanction and control of the committee. It is not applied to the settlement of general business, but only to bargains in certain stocks, and those such as are the subject of frequent speculative transactions. These comprise most classes of foreign government bonds and some particular English railway stocks. As it is not in universal use among the members of the exchange, any dealer who desires to settle his bargains through the clearing is able to do so only with regard to certain stocks, and even in those is limited to his bargains with such other members as also clear. The clearing is carried on entirely by means of balance-sheets and tickets; neither stock nor money in any form being received at the clearing house. On the settling day each member forwards to the clearing house a balance-sheet for each particular stock, giving on the one side the amounts of the stock purchased and to be received by him, and on the other the amounts he has sold and has to deliver, together with, in each case, the name of the seller or buyer. At foot is shown the net balance which he has to receive or to deliver. At the clearing house each item in this list is ticked off or cancelled against the corresponding item in the sheet furnished by the other party, until the balances only remain outstanding. The total of the balances of stock deliverable will then exactly equal the total of the balances of stock receivable, although the items making up each total will be different. Those who have to deliver stock are then furnished with tickets giving the separate amounts into which their balance has to be divided and the parties to whom they are to be delivered; whilst those who have to take in stock receive tickets showing by whom it will be delivered. The receiver pays to the party delivering the stock its value at a fixed price, which is settled on the account day, and is called the "making-up price." All differences between this price and those at which the various bargains were made are settled directly between the dealer and those with whom he has dealt. No particulars are obtainable of the transactions which are settled in this manner, but as the clearing is chiefly used by those dealers and brokers who transact speculative business, and the stocks which clear are only the most speculative and "active" classes, it is probable that the bargains "cleared" are among the heaviest in each "account." The existence of this arrangement is therefore a consideration of some importance in any comparison of the returns of the London Bankers' Clearing House before and after 1874. The liquidation of transactions on the Bourse at Paris is much more complete in its organisation, and applies to all the operations of the Agents de Change. In Vienna and Berlin the compensations effected by the institutions already mentioned also cover the greater part of the Bourse transactions.

The Beetroot Sugar Association of London established (in 1888) some arrangements for clearing bargains in beetroot sugar upon the following basis. The bargains to be cleared must always have reference to sugar of a certain range of quality, and to lots of 500 bags, each containing a certain weight. A broker having sold a quantity of sugar, starts a *filière* for each 500 bags, describing thereon the ship or warehouse marks, and all other necessary particulars. The *filière* is a sheet of paper printed at the head with the conditions of sale, and with spaces for insertion of the particulars referred to. It contains also a series of transfer forms which are filled up and signed by each successive holder, transferring the property to a new

purchaser. At the same time the purchaser signs a coupon form which is printed at the side of the transfer, quoting the date and hour of the sale. This is detached, and retained by the seller as evidence to determine any liability consequent on delay in passing on the *filière*. Any purchaser requiring delivery of the sugar can send the *filière* to the clearing house, instead of passing it on, and his name is then communicated by the officials to the first seller who tenders him the warrant direct. The *filières* may pass from hand to hand within a limit of six days, at each transfer a stamp being affixed for the clearing fee. The differences between each of the successive bargains are calculated to the profit or loss of the seller. In the former case, the clearing house issues a cheque in his favour ; in the latter case notice is sent of the amount due, which he is required to pay immediately to the bankers of the association. All the intermediate parties being struck out, any difference in the quality or weight of the sugar ultimately delivered concerns only the first and last parties, who settle it between themselves. The arrangement appears to be very complete, and as the advantages are considerable, it is already largely used. It must therefore make a great difference in the amounts of money passing in the trade. It is not unusual for *filières* to pass through twenty hands before delivery of the sugar, and if a lot of 500 bags was worth, say, about £600, the transactions represented in such a case would amount to £11,400, of which eighteen transfers amounting to £10,800, would be struck out, leaving only one amount of £600, and sundry small differences to be settled by actual payment. Besides this economy, there is the saving in clerical work, the avoidance of risk in delivering warrants from hand to hand, and of delay in tendering warrants, with a consequent saving of much expense in demurrage.

London Produce Clearing. An institution under this name was started in 1888, to regulate and adjust bargains in colonial and foreign produce. At first its operations were confined to coffee and sugar, but they have since been extended to other produce. The chief object of the company is to guarantee both to buyer and seller the fulfilment of bargains for future delivery. This it does upon payment by the contracting party of a margin sufficient to secure the company from loss. Indirectly, a certain amount of economy by clearing is effected, because transactions accumulate on either side during the month, and are settled at the end by payment of balances only. In this case also bargains are for commodities of a certain quality, and in specified quantities, or multiples thereof. If the clearing came to be extensively used, there would be a great saving in the amounts of cheques drawn. Other institutions upon the same lines are the "Caisse de Liquidation" at Havre, and the "Waaren Liquidations Casse" at Hamburg. For the "Cotton Brokers' Bank" in Liverpool, *v.* Cotton Clearing. In the tea-trade, the Tea Clearing House is only for economy of labour, by providing a central office for the lodgment and delivery at the various docks and warehouses of warrants, and orders for various purposes. Further, it is to be observed that by the extension of the warehouse system, a species of clearing is effected as regards the handling of goods, by warrants, which are used for intermediate transfer, whilst delivery is only made to the last buyer. Among the most important examples are the warrants of Connal's Stores at Glasgow, for pig-iron ; and, in the United States, the certificates of the United Pipe Line for petroleum, and the system of grading and storing wheat as adopted at Chicago.

Finally, the Railway Clearing House requires some notice, although it has other objects than settlement by "set-off." Its main purpose is to settle all the balances that arise out of through-booking, and to split up into different proportions the sums that are received for transport of goods or passengers, where they pass over different lines. For this purpose the railways send to the clearing house daily reports of all compound tickets issued at each station, and of all amounts charged for through carriage of goods. All spent tickets collected are also sent up to be compared with the accounts rendered. From these particulars the various companies are debited with the amounts received by them, and credited with their proportion of the work done according to the mileage of their line covered, the haulage, and the ownership of coaches, trucks, or tarpaulins used. Of course the principle of clearing is brought into play in effecting the settlement of all these claims. A regular debit and credit account is kept with every railway, and it is only called on to make payment when a considerable sum is owing, or when the set of the balances is all one way.

[See Clearing House, the London Bankers', in Appendix ; *Our Clearing System and Clearing Houses* (Howarth), *Clearing Houses et Chambres de Compensation* (François), *Clearing Houses* (Cannon), *Bankers' Clearing House* (*London*), (Matthews), and *Jour. Inst. Bankers, passim.* As to amounts settled outside of clearing houses, see "Proportionate Use of Credit Documents and Metallic Money in English Banks" (Pownall), *Jour. Inst. Bankers*, vol. ii. 1880-81.] R. W. B. ; F. W. G.

Cotton Clearing (Cotton Brokers' Bank). The principle of payment by "set-off" of differences has been applied to the very heavy monetary transactions arising from dealings in cotton at Liverpool. The system employed is fully described in the *Bankers' Magazine* for July 1887. No fewer than forty-six different forms for contract, orders for delivery, etc., may have to be employed in the process, and eleven

more connect the "Cotton Brokers' Bank, Limited," as the association through which the business passes is termed, with the clearing conducted by the branch Bank of England at Liverpool. The numerous forms mentioned are required to meet the various requirements arising out of the re-sale of the bales of cotton dealt with. These may pass through many hands after being in the possession of the original purchaser, before being finally disposed of. Insurance against risk by fire, the possibility of need for arbitration, in case of dispute and of appeal against an award, the different methods of dealing according to the special rules in force, whether the cotton comes from America or India, all the various incidents which may arise in the conduct of a very complicated business, are provided for through these arrangements, as well as the ultimate disposal of the money arising therefrom. The result has been a vast economy in labour, as well as in the use of the circulating medium. "Formerly all cotton was paid for in cash. Now all the effects, whether cash, cheques, bankers' drafts, or transfers (both by post and telegraph) are lodged with the Bank of England for the credit of the Liverpool Cotton Bank, Limited, clearing account. The members of the cotton bank then transfer the amounts required from one to another at the cotton bank, and at the end of the day the cotton bank sends the completed pay list to the Bank of England, and the ultimate receivers have cheques for their amounts. The object of the clearing house of the Cotton Association is to settle the very numerous sales and re-sales of an individual parcel of cotton by collecting and distributing the 'differences' due by, or to, the respective buyers and sellers. Formerly each transaction was settled, as any ordinary purchase or sale is, by the parties concerned; a very great economy in the labour of the process, as well as in the use of the circulating medium, is obviously effected by means of the 'cotton bank' and its connection with the Bank of England" (*Bankers' Magazine*, 1887, p. 591). The arrangements, though apparently simple, must have required an immense amount of technical knowledge and intelligence to put into shape.

CLÉMENT, AMBROISE, born at Paris 1805, died there 1886. From 1838 to 1848 and from 1850 to 1860 A. Clément was secretary to the mayoralty of Saint Étienne, and, in this capacity, rendered important services to that city, for example, successfully opposing, the establishment of store houses for grain (GRENIERS D'ABONDANCE, *q.v.*) desired by the imperial prefect of the Loire. He was one of the organisers and workers from the beginning in the *Dictionnaire de l'économie politique*, and wrote many articles in the *Journal des économistes*. His works are noteworthy on account of the firmness of their principles and their logical accuracy. He was faithful all his life to the principles of his master, J. B. Say, as his following works show; *Recherches sur les causes de l'indigence* (1846 in 8vo).—*Des nouvelles idées de réforme industrielle*, referring in particular to the project for the Organisation of labour by M. Louis Blanc (1848 in 18mo); *Essai sur la science sociale* (1867, 2 vols. in 8vo).—*Le bon sens dans les doctrines morales et politiques*, or the application of the experimental method to philosophy, moral sciences, and political economy (2 vols. in 8vo); finally, *La crise économique et sociale en France en 1886* (large 8vo), his last work. A. C. f.

CLÉMENT, PIERRE, born at Draguignan 1809, died 8th November 1870. He held a high official post in the ministry of finance, and entered the Institute (*Académie des Sciences morales et politiques*) through the imperial decree of 14th April 1855—All Pierre Clément's works consist of historical investigations conscientiously written, laboriously treated, and touching on financial questions, approached on the economic side. The following is a list of his principal works in order of publication: *Histoire de la vie et de l'administration de Colbert précédée d'une étude sur Nicolas Fouquet*, 1846 in 8vo (his best work, which obtained a prize from the *Académie Française* in 1848); *Le Gouvernement de Louis XIV.* (1683 to 1689), a continuation of the preceding (honoured with the second Gobert prize by the *Académie des Inscriptions et Belles-lettres* in 1848).—*Jacques Cœur et Charles VII.* (1853 in 18mo, prize from the *Académie Française*).—*Histoire du système protecteur en France de Colbert à 1848* (1854 in 8vo), a work written in the spirit of free trade; *Portraits historiques* (1855 in 18mo).—*Trois drames historiques* (in 18mo).—*Enguerrand de Marigny, Beaune de Semblançay et le Chevalier de Rohan* (in 8vo and in 18mo); lastly *M. de Silhouette, Bouret et les derniers fermiers généraux* (1872 in 18mo), this work was completed by Alfred Lemoine and published after the death of P. Clément. It was due to the labours of Pierre Clément that an important publication, *Les Lettres, Instructions, et Mémoires de Colbert* (1861-73, 7 vols. large 8vo), undertaken by the imperial government was successfully completed. The *Académie Française* voted its highest honours to this collection. A. C. f.

CLEMENT, SIMON (fl. 1695-1720), merchant of London. In 1696 he was concerned, along with other merchants, in an infringement of the NAVIGATION ACT (*q.v.*) by allowing a ship to be worked with a crew less than three-fourths of whom were English sailors. A plan which he proposed in 1708, for the importation of pitch and tar, was favourably considered by the government. From 1712-1714 he appears to have resided at Vienna; and in 1720 we find him presenting a memorial on behalf of the widow of William Penn, whose will was

disputed. He published *A Discourse of the General Notions of Money, Trade, and Exchanges as they stand in relation each to other, attempted by way of Aphorism*, etc., by a Merchant, London, 1695 ; and *The interest of England as it stands with relation to the trade of Ireland considered*, etc., London, 1698, 4to. Clement's pamphlets are well worth studying. Though not free from mercantilist errors, he anticipated in some respects the conclusion of later writers. He pointed out that "silver and gold . . . are to be considered but as a finer sort of commodities ; and as such are capable of rising and falling in price, and may be said to be of more or less value in divers places, according to their plenty or scarcity. Bullion then may there be reckoned to be of the higher value, where the smaller weight will purchase the greater quantity of the product of manufacture of the county." In an appendix, "offering some further reasons against raising the value of our coin," he opposed the views expressed by WILLIAM LOWNDES (*q.v.*) in his *Essay for the Amendment of the Silver Coins* (1695). Davenant quotes with approval Clement's "judicious observation," in his pamphlet on the trade of Ireland, "that if any one offers his goods cheaper than the usual price, that will then become the market price ; and every one else must sell at the same, or keep his goods."

[*Cal. of Treasury Papers*, xxxviii. 56 ; cvii. 40 ; cix 22 ; clxxxii. 37 ; ccxxviii. 18.—Davenant, *Essay, etc. on the Balance of Trade* (1699), 123 ; *Brit. Mus. Catalogue ; Cat. Bibl. Bodl.*] W. A. S. H.

CLERGY, BENEFIT OF. "Originally consisted in the privilege allowed to a clerk in orders, when prosecuted in the temporal court, of being discharged from thence and handed over to the Court Christian, in order to make canonical purgation."—(Stephen's *Commentaries on the Laws of England*, vol. iv. bk. vi. ch. xix.)

CLIENT. This word is derived through the French from the Latin *cliens* (*cluens* from *cluere*, to hear), which in one of its derivative senses signified a person who employed a *patronus* or *advocatus* to assist him in his cause (see Smith's *Dict. of Antiquities*, s. v. *cliens*).

A client is a person who engages a barrister or solicitor for the purpose of obtaining their professional advice or assistance. It is a rule of professional etiquette that a barrister should be engaged through the agency of a solicitor. Hence the solicitor is called the client of the barrister he briefs. The person whose cause is in question is also said to be the client of the barrister. The relation between barrister and client is not, like that of solicitor and client, a contractual one, a barrister not having a right like a solicitor to sue his client for his fees. This rule, that only an honorarium is due to a barrister, is derived from Roman law. E. A. W.

CLIENT, STOCKBROKER'S. The stockbroker regards his principal very much as a solicitor regards his client. In most cases a novice has to be advised as carefully about his investments as a litigator is advised by his solicitor. A. E.

CLIFFE LESLIE. See LESLIE, T. E. CLIFFE.

CLIPPED MONEY. Until 1663, English coins were not marked or milled on the edges, and the practice arose of clipping small pieces off the coins. By 3 Henry V. c. 6, clipping washing, or filing the coin of the realm was declared high treason. This act was repealed by 1 Mary, sess. 1, c. 1, but its provisions were re-enacted and extended by 5 Eliz. c. 11, and 18 Eliz. c. 1. The introduction of milling tended to prevent clipping, but during the 17th century clipping was a common offence owing to the large gains resulting. Notwithstanding the re-coinage of Elizabeth and the issue of new coins in subsequent years, the amount of clipped coins steadily increased, the new coin being melted down or exported. It was estimated that the coinage had lost one-third its weight. In 1695, provision was made for restoring the coinage to its full weight: the cost, amounting to £2,703,164, being met from the hearth-tax.

[Lowndes' *Essay for the Amendment of the Silver Coins*, 1695.—Macaulay's *History of England*, vol. iv.—*First Nine Years of the Bank of England*, by J. E. T. Rogers, Oxford, 1887.] J. E. C. M.

CLOFF OR CLOUGH. An allowance of 2 lb. in every cwt. after tare and tret have been deducted. It is given to cover small losses in retailing. J. E. C. M.

COALITIONS. See TRADE UNIONS.

COASTING TRADE. Coasting trade is trade carried on by sea between the various ports of the same country or state, and therefore in the case of this country includes the intercourse between Great Britain and Ireland (39 & 40 Vict. cap. 36, § 140). From the time of Elizabeth, if not before, the coasting trade was reserved to British subjects by various acts of parliament including the navigation acts of 1651 and 1660 ; but by the act of 17 Vict. cap. 5, this restriction was swept away, and all nations have since participated in our coasting trade. As, however, only 121,000 tons of *foreign* shipping were entered in 1888 in the coasting trade, compared with the 27,000,000 tons of *British* shipping, the effect of this free trade measure may be regarded as more moral than material. Many foreign countries have followed our example in this respect, allowing ships of other nations to share in their coasting trade, but there are still several notable exceptions, such as France, Russia, Spain, Greece, and the United States, where this trade is still reserved to the national flag. If the policy of allowing the utmost competition in carrying goods to and from our shores is a right one, it is difficult to maintain that the same competition is undesirable in trade between the various ports. The great bulk of the articles so

carried are raw materials, such as coals, bricks, timber, and the like, for which the cheaper carriage of the sea compared with that of the railway is a necessity, and we do not wish to endanger this cheap carriage by excluding competition. The regulations imposed on ships and cargoes in coasting trade are much less stringent than those on foreign-going ships. The following are the principal regulations prescribed by the act 39 & 40 Vict. c. 36. Foreign ships are subject to the same regulations as British as to stores, etc., and may not be subjected to higher local dues (§ 141). Under the following section (142) no goods are to be carried coastwise except those laden at some port or place in the United Kingdom, but under recent regulations in pursuance of the Revenue Act of 1884, a ship arriving from abroad is allowed to ship non-dutiable goods for coasting after discharging part of her cargo, and conversely a vessel which has been conveying goods coastwise is allowed to retain part of the cargo on board for exportation abroad. The master of the coasting ship has to keep a cargo book in which he enters particulars of the goods taken on board and discharged at the various ports, for the correctness of which he is liable under a penalty of £20 (Customs and Inland Revenue Act 1879, § 9). Before leaving any port, a document called a *transire* has to be signed by the collector of customs, and is the authority to the master to clear for the next port (39 & 40 Vict. c. 36, § 145). Fishing boats are exempt from even the light regulations of the ordinary coasting trade, and are entitled to carry from one part of the coast to another, besides their own fish and fishing appliances, a variety of bulky goods, such as ashes, bavins for bakers, bricks, stones, slates, clay, sand and gravel, lime, tiles, timber, and hay and straw. Fishing boats, however, exceeding 15 tons burthen must be registered under the Merchant Shipping Act of 1854.

The following table shows the growth of the coasting trade of the United Kingdom since 1850, at intervals of ten years.

	1850.[1]	1860.[2]
	Tons.	Tons.
Tonnage employed in the general coasting trade—		
British	10,979,574	11,342,532
Foreign	..	82,443
Intercourse between Great Britain and Ireland—		
British	1,585,057	5,558,656
Foreign	..	19,780
Total—		
British	12,564,631	16,901,188
Foreign	..	102,223
TOTAL	12,564,631	17,003,411

[1] Foreign vessels not admitted to the coasting trade previous to 1854.

[2] Before 1856, vessels employed between Great Britain and Ireland were returned as entered at ports in Great Britain only. From 1856, entries at Irish ports are included.

	1870.	1880.[3]	1888.
	Tons.	Tons.	Tons.
Tonnage employed in the general coasting trade—			
British	11,357,651	16,045,071	17,955,119
Foreign	74,079	88,212	103,024
Intercourse between Great Britain and Ireland—			
British	6,852,868	9,878,950	9,049,090
Foreign	15,677	10,316	18,436
Total—			
British	18,210,519	25,924,021	27,004,209
Foreign	89,756	98,528	121,460
TOTAL	18,300,275	26,022,549	27,125,669

In 1913, the figures were :—

	Tons.
British	32,539,002
Foreign	301,733
	32,840,735

Divided as follows :—

1912. British—		1912. Foreign—	
Sailing Vessels	2,513,450	Sailing Vessels	45,409
Steam Vessels	30,025,552	Steam Vessels	256,324
	32,539,002		301,733

[3] Before 1873, vessels employed in conveying ashes, bavins, bricks, tiles, clay, lime, gravel, iron ore, fresh meat and fish, hay and straw, timber and wood, and various other raw materials were omitted in the returns of tonnage.

A. E. B.

COBBETT, WILLIAM, born at Farnham, Surrey, 1762, passed his early years in farm-labour, and, after a few unhappy months in a lawyer's office in London, enlisted (1784) in the 54th regiment of the line, and served with it seven years in Nova Scotia. Retiring as sergeant-major, in 1792 he began his literary career as well as his married life. He settled in Philadelphia, but he was too stout a champion of England against France to be left in peace, and in 1800 he found himself again in England. He was at first well received by Pitt and his supporters, but soon broke off connection with all political parties, becoming convinced that corruption, and place-hunting, and waste of public money prevailed with little difference among Whigs and Tories. He was thus a radical reformer ; but neither republican nor revolutionist. His ideals lay as much in the past as in the future. He deplores the Protestant Reformation, but, since there is now no hope of return to monastic charity, he lauds the old poor law, as being with Magna Charta the foundation of English liberties (see *Manchester Lectures*). He talked not of abstract rights of man, but of rights of Englishmen, founded on the old laws of England ; his desire was to make the poor labourers as comfortable as in his father's time. This was his strain in the *Political Register*, which he issued week by week for over thirty years (1803-1835). There was only one serious break, from 1810 to 1812, when the editor lay in Newgate, under punishment for a severe article on flogging in the

army. In prison, besides studying Tull's *Husbandry*, he wrote his letters to the people of Salisbury, best known by the title *Paper against Gold*.

On his release he continued from his Hampshire farm to edit the *Register*. Embittered in spirit and reduced in fortunes, he was never more full of vigour in mind and body. The "White Terror" under Lord Sidmouth drove him in 1817 again to America, but he kept up his *Register* from his farm in Long Island, and returned in 1819 to his native country, with the bones of Paine as proof positive of his political conversion. Bankrupt through lawsuits in 1820, he quitted Hampshire for Kensington, still keeping tight hold of his pen. In the reformed parliament of 1832 he sat as member for Oldham till his death in June 1835.

His work in parliament was far surpassed in brilliancy and originality by his earlier achievements as a journalist. He was right in thinking that he was "of most weight as a spectator and commentator." As an agitator or man of action he showed little tact, taste, or knowledge of men; he was not a man of the world any more than he was a worldly man. The great obstacles to social reform seemed to him to be political, and it was because of what he thought to be their evil political influence, that he disliked the growth of the stock-jobbing commercial aristocracy of his day. He was in his eccentric way a labourer in the cause of popular education; he was an agricultural improver, importing the "locust tree,"[1] and trying to induce English farmers to grow Indian corn; he tried to revive cottage industries, especially straw-plaiting. He was intensely national, and yet his writings did more than most men's to make the American nation, and in a less degree the French, better understood by his countrymen. His strength lay in his clear logic and wonderful command of good homely English, as well as in his happy epithets. His chief failing was his vanity, pardonable in one who owed all his success to his own pertinacity, and all his education to his own diligence.

The discussion of economics apart from politics had no interest for him. Even his favourite subject, taxation, is treated simply with the sturdy common-sense of one whose views are limited, but whose powers of expression are boundless. Like Swift, he made excursions into economical regions, not because he was at all anxious to find truth there for its own sake, but because some prevalent economic error or other seemed to be hindering some project of reform which was dear to him. His antipathy to the economists of his time was not due to any general economic theories of his own fundamentally different from theirs. He denounced Malthus, and he denounced Ricardo, because he saw their doctrines afforded too easy a handle to his political enemies, the "borough-mongers." But, in his diatribes against a potato-diet, he uses arguments identical with those of Malthus; and, in protesting against the new corn law of 1815, he states the case as Ricardo or any free-trader would have stated it. "There are few articles" (he says in his letter "To the Journeymen and Labourers of England, Wales, Scotland, and Ireland") "which you use, in the purchase of which you do not pay a tax. On your shoes, salt, beer, malt, hops, tea, sugar, candles, soap, paper, coffee, spirits, glass of your windows, bricks and tiles, tobacco. On all these and many other articles you pay a tax, and even on your loaf you pay a tax, because everything is taxed from which the loaf proceeds. In several cases the tax amounts to more than one-half of what you pay for the article itself; these taxes go, in part to support sinecure placemen and pensioners; and the ruffians of the hired press call you the scum of society." For the most part, when Cobbett has hold of an economical truth, he can put it more clearly than another man, and there is little fault to find except the exaggeration which seems to be inseparable from all political writing. The "Letter to the Luddites" (30th November 1816, *Weekly Political Register*) is not only one of Cobbett's most characteristic and ingenious papers, but it contains one of the clearest popular descriptions ever penned of the economical benefits of the invention of tools and machinery. If he treats taxation as if it were the only cause of distress, we must remember that in his days, and indeed till the repeal of the corn laws, it was probably the most potent cause. Even during the course of the French War, when there was more apparent reason for high taxes than in 1816, he was never tired of declaiming against excessive expenditure and over-taxation; and his letters on *Paper against Gold* are simply one skirmish in his general attack on these evils. The letters in question are a lively, and in the main an accurate history of the suspension of cash payments by the Bank of England in 1797, and the effects of it on the currency. He gets his principles not directly from the economists, but from Paine's *Decline and Fall of the English System of Finance* (1796); he compares the English inconvertible notes to the French assignats; and is not careful to avoid the exaggerations of the "Ultra-bullionists," who explained all the high and low prices of those times by the state of the currency. His assertion that the bank neither would nor could ever return to cash payments was not confirmed by facts. But, with all its defects, the book is valuable for its pictures of the opinions and conduct of average Englishmen at a momentous

[1] The acacia, which was then better known under its American name of "locust tree."

period in the economical history of the country. In the same way we owe much to the *Register* for its glimpses of English working men, and their views in the darkest years of the 19th century.

Of Cobbett's numerous works the following are of most importance economically :—

The Weekly Political Register, 1803 to 1835.—*Paper against Gold*, 1810, 1811, reprinted 1817.—*Rural Rides* (reprinted from the *Register*), 1830.—*Two-penny Trash*, 1831.—*Tour in Scotland and in the four northern Counties of England*, 1833.—*A Year's Residence in the United States of America*, 1818.—*Cottage Economy*, 1821.—*Manchester Lectures*, 1832.—*Surplus Population and Poor Law Bill*, 1835.—*Legacy to Labourers*, 1835.—*Legacy to Peel*, 1835.—*Legacy to Parsons*, 1835.

[His biography is given by himself incidentally throughout his works (for example, in *Advice to Young Men*, 1830, and in the *Year's Residence in America*).—See also *William Cobbett, a Biography*, by Edward Smith, 2 vols. (Sampson Low, 1878).—George Gilfillan, (second) *Gallery of Literary Portraits*, 1849.—Adolf Held, *Sociale Geschichte Englands*, 1881.] J. B.

COBDEN, Richard, born 1804, died 1865. In 1841, being already a well-known and vigorous writer on public questions as well as an active advocate of free trade, he entered parliament, having contested Stockport, the borough which first returned him, in 1837. In 1857 he was not returned. In 1859 he was returned, while absent in America, for Rochdale, and sat for this constituency till his death. In these pages it is impossible to enter into the details of his public life.

Cobden was supposed, especially by those who did not know him, to be a mere advocate of *laissez faire* ; and the school which he was reputed to have founded was nicknamed the Manchester school, chiefly by Germans, and especially by German socialists. He might have been excused if he set great store on the liberation of industry from fiscal absurdities and shackles, and thought that the best service government could do to society was to let it alone, for he had abundant experience of the mischief which the meddlesomeness of government does. But he was far too wise and experienced a man to be satisfied with mere negations, and there were few persons who interpreted the constructive side of politics with more acuteness and more perseverance. Perhaps one of the most obvious illustrations of this statement, made by the writer who probably knew him more intimately than any other person, was his negotiation of the commercial treaty with France. A commercial treaty is in direct antagonism to *laissez faire*, and at the time was criticised on this ground. Similar to this was his attitude on national education, on which he entertained opinions which have not yet been accepted, though the country is manifestly bent on accepting them in the end. His views on foreign politics too, and especially the politics of trade, are gaining ground among the most thoughtful and intelligent public men. Cobden always refused public office, mainly owing to his antipathy to a statesman who was then in the ascendant. J. T. R.

[In this reference the notice of Cobden's sensitiveness preserved by Bagehot is interesting. Bagehot remarks in his vivid sketch of Cobden and his work : "He said at Drury Lane Theatre, in tones of feeling, almost of passion, curiously contrasting with the ordinary coolness of his nature, 'I could not serve with Sir Robert Peel.'" Bagehot's *Biographical Studies*, 1881, p. 336.]

Cobden's early life was in many ways a fit training for his later career ; he passed from his father's farm at Dunford near Midhurst in Sussex to a London warehouse, and became traveller for his firm ; in 1832 he began business in Manchester on his own account, and his cotton printing works at Manchester and Salden brought him the wealth which enabled him to conduct the long campaign against the corn laws.

Cobden is associated with three great political movements, the first for the repeal of protective duties, especially the repeal of the corn laws, the second against wars and military expenditure, and the third in favour of commercial treaties. The two first of these were parts of a comprehensive but simple political programme, which he held consistently through life. Like his friend Bright, he looked at political questions with the eyes of a man of business, and without much (if any) respect for tradition. In two early pamphlets, *England, Ireland, and America* (1835), and *Russia* (1836), he gave his ideas to the world substantially in the shape which they ever afterwards retained in his mind, though the necessity of negotiating commercial treaties seems to have been recognised by him only after the force of England's example had proved evidently insufficient to convert other nations to free trade. The general spirit of his whole policy is well expressed in the motto quoted by himself (in *England, Ireland, and America*) from George Washington :— 'The great rule of conduct in regard to foreign nations is, in extending our *commercial* relations, to have, with them, as little *political* connection as possible." We, he contends, have no commission to administer justice to the whole world ; and our interference will do more harm than good. We must set our own house in order and provide for our own people first. Further, if we are to pay our great national debt we must have a larger population and a larger trade ; and, if we are to have these we must throw off our feudal traditions and our habits of excessive military and civil expenditure, and above all our protective duties. After the repeal of the corn laws, Cobden's opposition to all indirect taxation became more, and not less, pronounced ; and his failure to prevent the war with Russia (1854), and the war with

China (1857) only increased his ardour in preaching a policy of what has been, not very happily, called non-intervention, or, not truly, peace at any price. His efforts to secure commercial treaties have been sometimes supposed inconsistent with his general principles (see Mallet's *Free Exchange*, 1891, where this objection is well rebutted). The "Manchester School" of politicians has ceased to play a distinct part in our parliamentary life, partly no doubt because its programme was inadequate to the problems of the new era, and largely also because many of its most important principles from being paradoxes have become truisms.

Besides the "Cobden Club," the Financial Reform Association, advocating direct taxation and the abolition of all taxation of goods, may be considered to represent his disciples. In matters of economic theory he drew his inspiration from Adam Smith; and, though he added little or nothing of his own, he had a remarkable power of making clear to a popular audience the several steps of an economical argument. As Bagehot said of him, Cobden "was not the discoverer of the free-trade principle. He did not first find out that the corn laws were bad laws. But he was the most effectual of those who discovered how the corn laws were to be repealed, how free trade was to change from a doctrine of the 'Wealth of Nations' into a principle of tariffs and a fact of real life" (Bagehot's *Biographical Studies*, 1881, p. 337). His association with Bastiat was of first-rate importance for the cause of repeal, but it has induced too many of his followers to adopt the economics of Bastiat as a whole (see *e.g.* Mallet's *Free Exchange*, p. 23, "without Bastiat, Cobden's policy would not have been elaborated into a system"). The economical writings of Perronet Thompson had an influence on Cobden of which he gave practical recognition by editing them for the League.

[*The political writings of Richard Cobden, with an introduction by Sir Louis Mallet, C.B.* (1878). This includes the pamphlets of 1835 and 1836 above mentioned, the four later pamphlets (1) "1793 and 1853" (2) "How wars are got up in India" (3) "What next, and next?" (4) "The Three Panics," and letter on "Rights of Belligerents."—*Speeches on Questions of Public Policy* (ed. John Bright and J. E. Thorold Rogers), new ed. 1878.—Translation of the treatise of M. Chevalier on the *Probable Fall in the Value of Gold* with a Preface (1859).—*Financial Reform Tracts*, No. 6 (on the Budget of 1849).—*Life of Cobden* by John Morley (1882).

See also Bastiat's *Cobden et la Ligue* (1854).—H. Ashworth's *Recollections of R. Cobden and the Anti-Corn Law League* (1876).—J. E. Thorold Rogers's *Cobden and Modern Political Opinion* (1875).—Bagehot's *Biographical Studies* (1881).—"The Policy of Commercial Treaties," John Morley, *Fortnightly Review*, June 1881.] J. B.

COCHUT, Pierre André, who was born at Paris 1807, and died there 1890, was from 1836 to 1869 one of the most laborious and valued contributors to the *Revue des deux Mondes*. His style was brilliant, his mind firm and independent. His articles were much valued, particularly those on Algeria. The *Rapport général sur l'Algérie*, which was altogether his work, was about to be distributed officially to the chambers at the time when the revolution of 1848 broke out. It was then that he published *Les associations ouvrières* (1 vol. in 8vo, 1851), a work which is still not out of date. Soon after appeared, *Law, son système et son époque* (1 vol. in 18mo, 1853) which, while brilliant in style, shows itself to be the work of an economist and a financier of the best school. Long a contributor to the *National*, he wrote afterwards in *Le Temps*. Questions of price and money occupied his attention much, and his opinion in these matters carried great authority. From 1870 to 1885 he was a director of the *Mont de Piété* at Paris, a post which had been offered him as far back as 1848. He was president of the *Société de Statistique de Paris*, 1888, and also vice-president from 1881 of the *Société d'économie politique*. A. C. f.

CODE NAPOLÉON. Before the French Revolution there were two kinds of law in France, the *droit écrit* or written law, and the *droit coutumier* or customary law; and the latter varied so much from place to place that Voltaire said a traveller changed his law as often as he changed his post-horses. Consolidation was attempted from time to time; the most successful effort in that direction was Colbert's Ordonnance; but practically the chaos remained until, on 4th August 1789, the Constituent Assembly ordered a code common to the whole kingdom to be drawn up; but Cambacérès failed for various reasons to accomplish the task then set him. Napoléon ordered the work to be taken up; he appointed a commission, consisting of Tronchet, Bigot de Préameneu, Malleville, and Portalis to prepare a code. They did so, basing their labours largely on the then existing French legal traditions, together with the Institutes, the Pandects, the Codex, and the Epitome Juliani. The successive portions were subjected to public criticism; the suggestions of the various tribunals and *tribunaux de commerce* were invited; the *Tribunat* of the year X. then discussed the clauses, but when they had got as far as the end of part iii. of the civil code, Napoléon found them troublesome and withdrew the code, expelled the opposition, and broke up the remainder into committees which were to discuss the clauses with the *Conseil d'État*. This was done; and the various portions, as they successively passed the *Corps Législatif*, were separately promulgated between the years 1804 and 1810. These portions, independent of one another, are (1) the *code civil*, (2) the *code de procédure civile*, (3) the *code de com-*

merce, (4) the *code d'instruction criminelle*, and (5) the *code pénal*. This code superseded all previous legislation, and where it does not provide for every case, much is left to the equity and good sense of the judge. This, with the multiplicity of co-ordinate jurisdictions in France, has brought about considerable conflict of decisions, and as precedents have there but little binding force, there is some considerable uncertainty as to what in a doubtful case the decision may be. The brevity of the code is condemned by Savigny and Austin, the latter of whom points out that there is an absence of definition of terms and of statement of guiding principles. The result of this has been the growth of a very full literature of the commentary order. On the civil code, which treats of civil rights under the three main heads of persons, property and its modifications, and the modes of acquisition of property, the commentaries of Duranton, Troplong, Toullier, Demolombe, Sirey and Gilbert, and (German) Zachariä may be consulted. The *code de commerce* treats of commercial law under the following heads :—(1) commerce in general: traders, traders' books, partnership and companies, partition of property, stock exchanges, stockbrokers and brokers, pledges, agents and common carriers, sales and purchases, bills of exchange, promissory notes and limitation; (2) maritime commerce: ships and other vessels, seizure and sale of ships, shipowners, the captain, hiring and wages of crews, charter parties and freight, bills of lading, the freight, bottomry, insurance, average, jettison and contribution, limitations of actions, exceptions or bars to actions; (3) bankruptcies and fraudulent bankruptcies: dealing with bankruptcy, fraudulent bankruptcy, reinstatement; and (4) jurisdiction in commercial cases: the organisation of the *tribunaux de commerce*, their jurisdiction, their procedure, and the procedure in courts of appeal. With reference to the *code de commerce*, the following works may be consulted:

Napoleon Argles, *French Mercantile Law*, 1882, and references therein, pp. xvii-xxiv; Mayer's *French Code of Commerce*, 1887.—Alauzet, *Commentaires*;—and with regard to the development of French law and legal tradition, Laferrière, *Histoire du droit français*. A. D.

CODICIL. A document executed for the purpose of modifying the directions of a will, and subject to the same requirements as to form as the will itself (*see* WILL). E. S.

COINAGE, THE RIGHT OF. "In constitutional law the right of coining has always been held to be one of the peculiar prerogatives of the Crown, and it is a maxim of the civil law that *monetandi jus principum ossibus inhaeret*" (Jevons, *Money*, p. 65). A hard use has often been made of this prerogative. A. Smith says (*Wealth of Nations*, book i. ch. iv.) "In every country of the world, I believe, the avarice and injustice of princes and sovereign states, abusing the confidence of their subjects, have by degrees diminished the real quantity of metal which had been originally contained in their coins." J. S. Mill has expressed himself much to the same effect (*Principles of Political Economy*, book iii. ch. vii. § 2). Governments found it their interest "to interdict all coining by private persons; indeed their guarantee was often the only one which would have been relied on, a reliance, however, which very often it ill deserved." The English standard for the gold coin has remained unchanged in fineness since 1600, and the number of grains of fine gold in the pound sterling since 1717, when Sir Isaac Newton was master of the mint. The *process* of coining requires to be carried on with great scientific care. See ALLOY; ASSAY; BETTERNESS; BRASSAGE; BULLION; MINT.

[W. S. Jevons, *Money*.—Lord Liverpool, *Letter to the King on the Coinage*.—F. A. Walker, *Money*.—E. Seyd, *Bullion and Foreign Exchanges*.—W. Bagehot, *A Universal Money*,—*Select Tracts on Money*, printed for the Political Economy Club, etc.]

COINAGE, DECIMAL. See DECIMAL SYSTEM.

COKE, ROGER (fl. 1643-1696) was the third son of Henry Coke of Thorington, by his wife Margaret, daughter and heiress of Sir Richard Lovelace of Kingsdown, Kent, and grandson of Sir Edward Coke. He was educated at the University of Cambridge, where "he became well-vers'd in several parts of learning, and wrote a treatise against Hobbes' *Leviathan*." His principal study for some time was mathematics, but he also took great delight in commercial questions. "Tho' in his day he had good speculative notions in trade, he was not so successful in the practice of it." He fell into distress, and the "best support he had" was an annuity of £100, which was settled upon him by his nephew. "He lived for some years within the rules of the Fleet, and died a bachelor about the 77th year of his age." In his writings Coke, erroneously assuming the accuracy of SAMUEL FORTREY'S (*q.v.*) statistics, maintained that English trade and commerce were decaying; but he made many sound suggestions for their improvement. He denounced the trading corporations, which had "the artificers at their mercy," and suggested that they should be made free to all English citizens. The Statute of Apprenticeship (see APPRENTICESHIP, STATUTE OF) in his view prepared materials for the Poor Law to work upon. He advocated the repeal of the laws of naturalisation and of the acts restraining the importation of Irish and Scotch cattle. The exclusive privileges of the trading companies (see FOREIGN TRADE, REGULATION OF), which restrained English foreign trade within narrow limits, should be abolished. The NAVIGATION ACT (*q.v.*) had, in his opinion, secured the monopoly

of the foreign trade of the country to a few merchants, to the detriment of the producing classes. Similar laws had been found by experience to be mischievous in their operation, and, in support of his objections, he quoted the evidence laid before the committee on trade in 1668 (*v.* FREE TRADE). He maintained that the free importation of raw material and of foreign manufactures should be permitted. This would lead to "plenty and cheapness" of all things needed by "the poor artificers," and to the increase of trade and commerce.

Amongst Roger Coke's works may be mentioned —1. *A Detection of the Court and State of England during the four last reigns and the interregnum, consisting of private Memoirs, etc. . . . Also an Appendix discovering the present state of the Nation*, 2 vols., London, 1694, 8vo.—2. *A Discourse of Trade, in Two Parts. The first part treats of the reason of the decay of the strength, wealth, and Trade of England. The latter of the growth and increase of the Dutch trade above the English*, London, 1670, 4to.—3. *England's Improvement. In two parts: in the former is discoursed how the Kingdom of England may be improved in strength, employment, wealth, and trade: in the latter is discoursed how the navigation of England may be increased*, London, 1675, 4to.—4. *A Treatise wherein is demonstrated that the Church and State of England are in equal danger with the trade of it: Treatise 1. Reasons of the increase of the Dutch trade: Treatise 2*, London, 1671, 4to.—5. *Reflections upon the East Indy and Royal African Companies: with animadversions concerning the naturalisation of foreigners*, London, 1695, 4to.

[Coke's *Detection*, etc., 4th ed. (1719), i. xiii.—MacCulloch's *Literature of Political Economy* (1845), 4to.—Adam Smith's *Wealth of Nations*, ed. MacCulloch, 4th ed. (1853), xxxvii. 536.—Carthew's *Hundred of Launditch*, iii. 109.—*Brit. Mus. Catalogue.*] W. A. S. H.

COLBERT, JEAN BAPTISTE, born at Rheims 1619, died at Paris 1683. The son of a woolmerchant, Colbert became one of the greatest ministers France has ever seen; he formed part of the establishment of Cardinal Mazarin from 1649 to the death (9th March 1661) of that statesman, who on his deathbed recommended him to Louis XIV. Appointed immediately, 16th March 1661, intendant of the finances, he succeeded, on the day of the arrest of Nicolas Fouquet,—5th September 1661,—to him as superintendent, directing the finances from that date, originally under cover of a financial council, afterwards, from 1666, as comptroller-general. His first step was to reduce the TAILLE (*q.v.*), a direct property tax; he then established a departmental office (*chambre de justice*), which carried on its operations from 1662 to 1665, and was only definitely closed in 1669, after having brought in 110 millions (say £4,400,000) to the state. After some trifling reforms, he promulgated the customs tariff of September 1664, which, establishing a more complete unity of plan, was certainly an improvement on the preceding order of things. It might even have produced real progress had Colbert, supported as he was by Louis XIV., been more confident in his own strength, and had he abolished, as the *États généraux* of 1614 desired, all internal customs restrictions, and removed the fiscal barriers to the frontier. But beyond this there remained still to be carried out the settling of the rate of duties. Colbert's regulations, certainly severe, though preferable to those of his predecessors, were rendered more strict, first in 1667, then again in 1672, when they even were the cause of the war with Holland.

Colbert, we must admit, while he put down with laudable strictness, and even severity sometimes, financial dishonesty, was carried away by his love of system and of making regulations for the control of commerce and industry. Thus he established, 1664, the two commercial companies of the East Indies (Hindustan), and of the West Indies (America). Notwithstanding his support, and in spite of the liberality of Louis XIV., these two associations, based on monopoly, gradually sank. The first vegetated on even to the times of Law (1719), but the second died in 1674. The ordinance of 1666 on manufactures and corporations was a new manifestation, and a more regrettable one, of his tendency towards regulation. To organise an industrial movement, to sustain it by custom-house regulations, always protectionist, at times prohibitive, to create model manufactures—or at least manufactures having those pretensions, sometimes through the intervention of the state and with the money of the taxpayer (Beauvais, 1664, the Gobelins, 1667), at other times (St. Gobain, 1665) through a privileged concession; this is the whole of the economic method which goes by the name of the system of Colbert. This great minister was not, after all, systematic enough to have deserved to give the name of Colbertism to his system. His methodical mind only occupied itself with overcoming difficulties, with adopting reforms one by one, after having maturely studied the consequences, particularly the immediate consequences. Though a hard worker, energetic in character, supplying the deficiencies of ignorance through supremely good sense, Colbert was never able to rise to the level of a general idea.

His activity gradually extended itself to the shipping interest, the care of which was added, 1669, to his duties; and to the arts, which he encouraged both in France and even in other countries by presents, pensions, or payments, considerable in amount, especially when the date is considered. He founded, 1663, under the title of the *Petite Académie*, the Academy of Inscriptions and Belles-Lettres; then, 1668, the academy of the sciences. He encouraged the taste and the expenses of luxury, particularly in the way of building, in Louis XIV., and

even spent large sums on festivities in the furtherance of that economic error, *faire aller le commerce*, to "make trade go." He founded the opera in 1667. He presented Riquet—and this was more useful—with the concession of the canal to join the two seas, constructed between 1665 and 1681, by means of the subsidy voted by the states of Languedoc. The canal of Orleans (1679) was also undertaken about the same time, and the canal of Burgundy projected.

Colbert thought it his duty also to give encouragement to the growth of the population by pensions to large families—but all that he did by this was to supply misery with fresh victims. Unfortunately all this activity turned capital aside from employment in agriculture, which suffered the more under the administration of Colbert because he put hindrances on the circulation of corn by regulating both the inland and foreign trade in it.

Besides this, the passion for extravagant expense took, with Louis XIV., a development which ended by making Colbert uneasy. A more serious consequence followed. The taste for war seized the king, and Louvois, secretary of state for the war department, 1662-1691, overweighed the influence of Colbert in the mind of the king, and contributed powerfully to develop this taste, to the misery of France. A few hard words addressed by the king to Colbert completely overwhelmed him and resulted in the illness which brought him to the tomb. An honest soul, deeply attached to his country, he sought its prosperity by purely practical means. He loved his king, and favoured peace. When the condition of affairs which surrounded him is considered—the difficulties he had to overcome—the indomitable energy with which he endeavoured to institute reforms, and the perseverance he displayed in bringing them about, no doubt can exist that posterity has been right in giving him the title of the *Great Colbert*.

[The "*Lettres, instructions, et mémoires de Colbert*" were collected and published by M. Pierre Clément (1861-1873 in 7 vols. gr. in 8vo). Besides this, among other works on this great minister, there may be read: *Histoire de la vie et de l'administration de Colbert, par* Pierre Clément (1 vol. in 8vo, 1846).—*Etudes sur Colbert, par* Félix Joubleau, *ouvrage couronné par l'Académie des sciences morales et politiques* (2 vols. in 8vo, 1856).—*Colbert et son temps, par* M. Alfred Neymarck (2 vols. in 8vo, 1877). We may quote among biographies of Colbert those of Forbonnais, Bailly, Montyon, Necker, Lemontey, Ad. Seviez, and Jean Reynaud.] A. C. f.

COLLATERAL SECURITY. See CAUTION.

COLLATION. See SUCCESSION, SCOTLAND.

COLLECT. To obtain payment of a bill of exchange or cheque as agent for another person. An indorsement "for collection" does not transfer the property to the indorsee; it is merely an authority to encash the amount at maturity. If the indorser becomes insolvent before maturity, the indorsee has to account for the proceeds to the estate, and cannot set them off against a debt due to him from the indorser. E. S.

COLLECTIVE GOODS include all those desirable things which are not appropriated by particular individuals to the exclusion of others, but are available to all members of the community, *e.g.* turnpike roads, great rivers such as the Thames, public museums, free libraries, the right to a free education. Such goods constitute a very important element of national wealth. Compare Marshall, *Principles of Economics* (2d ed.), bk. ii. ch. ii. § 4. J. N. K.

COLLECTIVISM is the theory which teaches that land and capital, or the means of production, should be the property of the whole community in order to secure effective production and equitable distribution. It is thus not a different doctrine from that which is now usually meant when the word socialism is used. "The word is new, but the idea is found in every system of radical socialism" (É. de Laveleye, *Le Socialisme Contemporain*, 3me éd., 1885, p. 285). M. Paul Leroy Beaulieu, in his book *Le Collectivisme* (1884, 2me éd., 1885), which is in large measure a criticism of Schäffle's *Die Quintessenz des Socialismus*, defends the neologism on the ground that it is more definite than *Socialisme*, which he understands in a large and vague sense as nearly equivalent to what is in England called state interference. The name "collectivist" was at one time appropriated by the socialists who opposed what they called the authoritative communism of Marx. BAKOUNIN (*q.v.*) declared himself "a collectivist and not a communist" at the fourth general meeting of the INTERNATIONAL (*q.v.*) in 1869 (J. Garin, *L'Anarchie et les Anarchistes*, 1885, p. 79). The whole subject will be found fully treated under ANARCHISM and SOCIALISM, vol. iii. and App.

[Authorities quoted in the text.] E. C.

COLLEGIUM. This term in ancient Rome signified a corporate body composed of individuals in partnership for the pursuit of some common end. *Collegia* existed at different times for the pursuit of the most various ends, religious, social, and political, but the collegia of most interest to the economist were the *Collegia Artificum* and the *Collegium Mercatorum*. The free workmen in Rome from very early times were organised according to their respective trades into collegia. The foundation of the system is variously ascribed to Numa Pompilius and to Servius Tullius. Authorities agree, however, in fixing the original number at nine, and the extreme antiquity of the system is vouched for by the fact that among the nine was a collegium of workers in bronze, but none of workers in iron. Early in the 4th century B.C., a collegium of merchants was added to the number, and in later times the

publicani appear to have formed a collegium. There is, unfortunately, very little positive evidence as to the precise constitution and importance of these collegia. Like the mediæval craft-guilds they appear to have combined a social and religious with an industrial side. It cannot be ascertained to what extent their organisation applied to the provinces; but they apparently resembled the craft-guilds in being local organisations. The collegium of the sailors, however, resembled the COMPAGNONNAGES (*q.v.*) in possessing local branches in the provinces. The original nine collegia of craftsmen were always exempt from the repressive legislation which was from time to time promulgated against other collegia, and they continued to exist in Italy until the Middle Ages, when the compagnonnages and craft-guilds were developed from them. Owing no doubt to the preponderance of slave over free labour in Rome, the collegia of workmen had little direct influence on history. They never appear to have attained an importance at all comparable with that of a Trade Union in modern times.

[Smith, *Dictionary of Roman Antiquities*, 1891. —Mommsen, *History of Rome.*—Mommsen, *De Collegiis et Sodaliciis*, Kiel, 1843.] A. H.

COLONIES.

Colonies, description of, p. 321; Colonial Policy, p. 322; Colonial Lands, p. 323; Public Debts, Colonies, p. 324; Trade and the Flag, p. 324; Methods of Government, p. 326; Currency, British Colonies, p. 326; Denominational Currency, p. 328; Government by Companies, p. 329; Colonisation, Systems of, p. 333.

COLONIES. The definition of the term "colony" is elastic, and its use is much governed by accidental circumstances, *e.g.* Ceylon is styled a "colony," and Burmah not, because they are directed by different departments of state at home.

Modern colonies, which are those treated of here, have been founded by the nations of western Europe since the time when their energy sent them one after another in quest of profit and adventure away from the Mediterranean lands which had fallen into the power of the Mohammedans. They fall into four economic types:—(1) *Factories*, those established for trade with natives; (2) *Provinces*, for exploiting, more or less explicitly, the countries taken possession of; (3) *Plantations*, for industrial occupation through employment of capital; and (4) *Colonies proper*, for complete industrial occupation. Other than economic motives have influenced the origination of modern colonies: religious liberty sent out the Jews of Portugal to Brazil; the Puritans to New England; religious enterprise the Jesuits to Paraguay; political disaffection sent cavaliers to Barbados; social offences supplied Australia with her first colonists.

1. The *Factory* system was the earliest, and was prosecuted with great vigour by the Portuguese, who, in rivalry with Venice and Genoa, drew a chain of factories from Madeira to Japan. When Portugal fell (1580) for a time into the clutches of Spain, the Dutch stepped in and secured many of their positions; in time the French and British followed up the Dutch. The Portuguese factories were royal enterprises nominally, but were farmed out; the Dutch were purely commercial undertakings, governed by the approved methods of trade found successful in Holland, and adopting a method known in present days as limitation of output, where thought necessary. The concentration of aim upon profit proved eventually their weakness. The yielding of heavy dividends promptly and regularly can hardly be an adequate basis for great human movements such as colonisation, and a clear example of the failure of such an attempt is to be found in the brief duration of the Dutch power in Brazil, 1624-1654.

2. *Provinces.* In these the inhabitants already in possession are governed and, in most cases, made use of for industrial employment. The story of Spanish colonisation is found in the histories of Mexico and Peru. The Spaniards were misled by the idea that gold and silver were identical with wealth, and fanatical in their preference for ecclesiastical system over humanity. The end of their dominion was sudden. In thirty years the Spanish empire in the new world was gained; it lasted two hundred and fifty years; in another thirty years it fell, leaving behind but Cuba, Puerto Rico, and the Philippine Islands. Still, the Spaniard did a little for the economic development of those countries: he taught the use of horses, of ploughs, and of money. France has recently formed a new province in Africa, but its interest is mainly military, and the economical value of their rule in Tonquin and Cochin China, to either party, is at present obscure. The greatest example of the province in the history of the world is undoubtedly that agglomeration of peoples, nations, and languages called "India." The economic and the educational value of the relationship between Britain and India has continually become more and more important, as that relationship has gradually taken its legitimate form.

3. *Plantations.* This type of colony has furnished a varied and interesting chapter in the history of each of the colonising countries of western Europe. When regions entered upon were inhabited by races in primitive stages of industrial life, these were either brought into service, as in Brazil, Ceylon, and the mines of Mexico and Peru, or pushed aside, as in North America. The primary purpose of these plantations was the employment of capital, not the application of the planter's labour—which indeed the climate as a rule rendered impossible. Native labour was brought into subjection

Gaols at home were emptied of their lawful inhabitants to furnish labourers for Virginia, and the sad history of the extermination of the natives of the West Indies by the Spaniards, and the crushing of the natives of Mexico, Peru, and Brazil by Spaniards and Portuguese was marked by the most disgraceful subordination of moral principle to industrial circumstances ever practised on such a scale and in so gross a manner —the deportation and enslavement of African negroes (see SLAVERY and SLAVE TRADE).

This extraneous supply was resorted to on the extermination of the inhabitants of the West Indies, the proof of ineffectiveness of those of Brazil, and of the inability to domesticate the Red Indians of North America; and it has resulted in the settlement of an important fraction of the Negro race in the western hemisphere. Recent years have witnessed the development of a system of regulated voluntary migration of tropical labourers from the east to the west under the name of Coolies (see COOLIE SYSTEM).

In spite of the mediæval character of the Virginia or Jamaica planter in many respects, he was more the prototype of the modern agriculturalist or manufacturer in England than was the New England or Pennsylvania farmer who owned his land, employed his own capital, and with his family supplied a considerable part of the labour. And as time went on plantation-owners were only represented by "attorneys" and managers, and yet their revenues, being derived from invested capital, were always regarded as profits, not rents. What has changed is the political and social status of the labourer. He still remains economically dependent so long as he has no capital, but his condition is gradually improving.

4. *Colonies Proper.* England only, of all European countries, was in a position to put forth vigorous reproductions of herself throughout the 18th and the 19th centuries. Of recent years (1910), since the settlement of northern Europe and the formation of the German empire, the spirit of colonisation has developed both in France and Germany, but at present few of the Colonies of either of these nations have a revenue sufficient for the cost of administration.

Emigration from European nations contributes an element to the primarily English life of the United States, and the English colonies of North America, South Africa, and Australasia. The Dutch settlement in South Africa, and the French remnants in Canada and Mauritius, show a certain persistence. A conspectus of the present situation shows a varied spectacle. Relics of four empires, Spanish, Portuguese, Dutch, and French, strew the seas; but all of them are of the factory, province, or plantation type. Nations, once European colonies, occupy the western continent from the St. Lawrence to Cape Horn, British, Spanish, or Portuguese in origin and in economic character. The British empire stands out unique in magnitude, in variety, and in promise. It shows every type in full working order. Factories flourish, as Lagos, Hong-Kong, and Singapore; provinces, as India, Burmah, Fiji; plantations, as Ceylon, Mauritius, Guiana, and the West Indies; and reproductions of the British nationality in the dominion of Canada, in South Africa, and in Australasia. Besides these, are the military, naval, and commercial out-stations of Gibraltar, Malta, Cyprus, Aden, St. Helena, Bermuda, and the Falkland Islands.

[For full accounts of the present condition of European colonies, see the list of books at the end of this article, and also "British and Foreign Colonies," Sir R. Rawson, address to Statistical Society, London, 1884.—For a continuous history, see E. J. Payne, *European Colonies*, Macmillan, London, 1877.]

COLONIAL POLICY.* The economic policies which have prevailed have been applications in new fields of policies already in vogue in the home countries. To reap the advantages of the new territories either by direct acquisition of their products or by exchange at enormous profit, and to appropriate these advantages as against other European nations, was the chief aim of the attention devoted to colonies throughout, and is to some extent in active operation at this day. Holland still derives a substantial revenue from her remaining possessions, and the reiteration of the question "of what use are the colonies to us?" shows that in England economic advantage is still a prominent factor in the Englishman's care for the "empire." The chief differences in policy lay in the exact relationship of the home government to the new communities; some reserved full control, as Spain and Portugal; some reserved only partial control, and delegated considerable power to the original companies, and afterwards to the colonial governments; but all agreed in regarding them as fresh sources of supply, or fresh markets for home products. It seemed to contemporary statesmen plain common sense to provide that the colonies should be content to supply what their territory was able at once to produce, to buy and sell in the markets of the home-country alone, and not to compete with her in foreign markets. The aggregate of these restrictions, monopolies, and privileges constitutes what is usually set forth as the "colonial system," which prevailed for some three hundred years. But this system must not be considered as consisting only in these restrictions. A brief consideration of it as designed by Colbert, for example, or as nursing the young colonies of North America, shows that at its early stages the advantage was not all on

one side. If Great Britain monopolised the products of her colonies, and restricted them to herself for their purchases, this was in some important respects only confining them to their best customer and their cheapest market. And besides this, the imperial army, navy, and credit were behind them, and left them free to their industrial pursuits. But as the colonies grew stronger the necessity for fostering lessened, and the situation began to be disadvantageous. Practical protests in the way of smuggling began to shake the legal position, and the eventful year 1776 saw both the declaration of independence of the thirteen British colonies in North America, and the reasoned demonstration that restrictions were operating perniciously, in Adam Smith's criticism of the whole system. It may be said that his condemnation is based on the cessation of the idea that the colonies were property, and the substitution for this of the economic idea that we and they were concerned in the production of as much material wealth as possible, and that it was not to the advantage of either that restrictions based on "artificial" (or non-economic) relations should continue.

In the general movement towards free trade as British economic policy, the Navigation Act was modified, and eventually abolished (see FREE TRADE). The differential duties in favour of her colonies were relinquished, and the country which was the latest to apply the restrictive method strictly was the first to abandon it. The issue has been a complete dissolution of the old relationship, relaxation of control has proceeded to the bitter end, and the spectacle is now seen of colonies, not only not tied to the mother country, but setting up tariffs which put her on the same footing as every other nation—in some cases even carefully excluding her products as much as theirs. Some, indeed, are only accidentally protectionist, raising their customs duties for revenue, as South Africa and New Zealand, but two at least, Canada and Victoria, are avowedly prohibitive in their intentions. This situation has given rise to many proposals for a resumption of economic relationship by means of a commercial union of the empire, a British "Zollverein," and this constitutes the most burning question of economic colonial policy at this day. It should be noted that the various members of the United States of America form a compact union with free intercourse within, and protection against outsiders; that neither Holland nor Spain have allowed their colonies commercial independence, while France is moving towards restriction again for hers; and that the German political economist List in urging Germany to begin colonies, did so on the supposition that the old system of union rather than the new system of absolute freedom would be the basis of relationship. The effects on the economic growth of a community of its being a "colony," depend largely upon the relative force of the national and cosmopolitan feelings. In early days of rivalry and hostility between nations, the connection was of vital importance, because people would not incur expatriation, nor would capital venture itself beyond the nation's protection.

But now what colonies secure is only some advantage in the movement of capital, not an exclusive advantage. The feeling that the Government of the empire is, somehow, behind them, that they are in some ways still under a department of state, operates with considerable effect in their favour, and is preparing the public mind for the extension of the investments of trust funds to colonial government securities. As to advantage in the movement of labour, the colonial relationship cannot be said to count for very much in the face of the preponderance of emigration from Britain and Germany and Sweden to the United States; but probably less skilled and professional labour would go to Australia were it not a part of the Empire. Looked at broadly, it may be seen that to the ex-colonies of North America, and the present colonies in Australia, there has been a movement of capital and labour which has enabled Chicago, Melbourne, and Montreal, to attain their population and opulence with a rapidity far outstripping anything known in the old world with all its inheritance of endowments and equipments for industrial development.

The effect on the home countries of having colonies was more important under the old system than now. Then they were direct sources of revenue, or monopolised spheres of trade. The increase of intercommunication through facilities in travelling, the settling down of the new free trade policy, and the rise of competitors in manufacturing industry on the continent, have brought into full view what the outer empire means for British industry to-day. We can see clearly how it has been a field for emigration, and so has assisted in the rise of wages; an outlet for capital, and so has helped to check the fall of interest and of profits; a market for manufactures, and so has called into action the law of increasing returns, and effected a cheapening of commodities in spite of the rise of wages; and a source of agricultural supply which has checked the operation of the law of diminishing returns. It has contributed largely to the development of our manufacturing powers, and has thus helped to pay back the debt which List says it owes when he bases the British empire on the capacity of Great Britain for becoming a predominantly manufacturing nation. [See COLONIAL POLICY, RECENT DEVELOPMENTS, in App.]

[COLONIAL LANDS. The tenure of land has

in the main been on the simple basis that the crown was possessor, and could grant lands *in perpetuum* or on leases, and in colonies which acquired responsible governments these governments have taken over the rights of the crown. The raising of revenue by the sale of land has been common, especially in order to allure immigration. Gradually a more far-sighted policy is being adopted; the colonies are ceasing to live on capital in this way. Victoria now carries the proceeds of public sale of lands to a reserve fund; New Zealand, since 1879, has reserved the whole, Tasmania about one half. An important question of policy is raised by the supposition that the colonists at any given time are, corporately, the possessors of the lands of their territory—a supposition which, on its face, is barely reasonable for Victoria with a population of a million in a region larger than England and Wales, and incongruously absurd when the 50,000 people at present in Western Australia lay claim to a third of the Australian continent. The importance of this to the mother-country lies in the consequent claim of the colonists to restrict farther emigration at their discretion.

The Public Debts of the Colonies. The colonies have borrowed capital, as corporations, to the extent of something like 390 millions at present outstanding. But exception is taken, and with justice, to this being regarded as analogous to the national debts of European countries rather than to the debts of traders who have legitimately borrowed for use as capital. The chief portions of the national debts of the continental nations, of Britain, and even of the United States, have been borrowed for the expenses of war; the chief portions of these colonial government debts have been borrowed for public works, especially railways. The interest on the debts is largely provided by the receipts from these public works, and from this source much of the debts themselves will gradually be paid off. It is maintained by some, but denied by others, that in some cases colonies have been too sanguine, and have drawn somewhat in excess of what is easily repaid, but only because they may have constructed more public works than they were immediately able to make remunerative.

[See papers by Sir F. Dillon Bell, "Indebtedness of the Australian Colonies in relation to their Resources," with discussion, *Roy. Col. Inst. Proceedings*, vol. xiv. thereon; and by H. F. Billinghurst, "Colonial Indebtedness," *Journal of Inst. of Bankers*, March 1889, and discussion.—W. Westgarth, "Australasian Public Finance," *Colonies and India*, March 27, and discussion, April 3, 1889. The first principles of this subject are well discussed by Dr. Sidgwick in the third book of his *Political Economy*.]

The rate of interest in the colonies has proved a clear index of their growth, of the increase of confidence in their stability and future, and of the security of their commercial connection with the home country whether the political continues or not. Loans to private borrowers used to range at fancy rates until the formation of joint-stock companies in England with boards of directors composed, partly at least, of well-known Englishmen. Sixty years ago government loans were at 6 per cent, and even then taken only at a discount, but gradually the rates fell until, in the period from 1895 to 1905, the 4 per cent of some colonies were at a premium, and Canada issued a 3 per cent loan, while the Australian colonies were advised severally to consolidate their loans at that figure. The "inscribing" of stock, permitting the amount to stand in the names of individuals, has attracted investors to whom changes of investment are objectionable; the lengthening of the periods of redemption has operated in the same direction. The conversion of the 3 per cents in England, the tendency towards 3 per cents of municipal corporations in the United Kingdom, with a fluctuating taste for foreign investments, all incline the flow of capital to the colonies. Of this, however, they have availed themselves so freely that during the past few years the rate at which they can borrow has again shown a tendency to rise.

[See paper in *Proceedings of Roy. Col. Inst*, vol. ix., by Dr. J. Forbes Watson, "Character of England's Colonial and Indian Trade contrasted with her Foreign Trade."]

Trade and the Flag.—This is a figurative expression for the connection between commercial intercourse and political union. Much argument is used and masses of statistics have been compiled on both sides of the question, which is, indeed, of very great interest and importance.

To those who regard the political connection as effective in the commercial sphere, it is of extreme importance that the political connection should be retained, and strengthened, if need be, by judicious improvements; this is the primary consideration with many of those engaged in the Imperial Federation propaganda, though not a plank in their official platform.

Those who think that purely economic considerations are now — perhaps ought to be always—adequately powerful to guide peoples in the pursuit of material well-being, regard lightly the continuance of political ties, especially when so attenuated as those between the English-speaking countries and the mother country have become. They hold that natural propensities are self-acting, and will operate in keeping up a close commercial relationship, and that government relations are either worthless because quite unnecessary, or pernicious because distorting the natural procedure.

It is evident that the influence of statistics upon this discussion is limited; but the federationists can certainly at present point out some striking figures, such as Great Britain's exports to

France being 16s. a head of French population, when those to Australia are 196s.; and U.S.A., English-speaking but outside the flag, 15s., to Canada's 45s. But the opponent replies, (1) that this trade is due to the large loan operations: and the question then resolves itself, so far, into the fundamental question of the mobility of capital and labour, is this helped or hindered by the political connection? and (2) that the Canadian tariff is not so hostile,—but this may be one consequence of the flag.

[See Forster, Art. in *Nineteenth Century*, Feb. 1885, and the publications of the Imp. Fed. League generally, and on the other side Sir T. Farrer, *Free Trade versus Fair Trade*, 4th edition, 1887, and the publications of the Cobden Club. The subject, however, is not to be discussed as between protectionists and free-traders, as the chief men on both sides claim to be the latter. The imperial unionists are reinforced, however, by the fair-traders and by the supporters of national economics; see S. S. Lloyd's translation of List.]

A problem of growing interest is the claim of the colonists to consider themselves as owing no effective allegiance to the mother country. The elaborate tariffs, already mentioned, form the backbone of the problem. There are also the questions of the right of the colonists at any given time to stop farther immigration from Britain or elsewhere into lands which British policy has secured from possession by other nations, and the British navy has secured from physical aggression; and the right of the colonists of the day to throw possible embarrassment on the future development of the colonies, and their utility to the mother country by injudicious allotments of the land of the colony, and in disregard of the fact that the inhabitants of Great Britain and Ireland pay interest on a vast debt partly acquired in maintaining the sovereignty of the seas which has kept France and Germany out of Australia, while the colonists are under no liability for this debt. New effects of economic conditions upon social and political organisation will present themselves in some of our colonies. For example, Victoria is a state in which labour more or less skilled, and guided by higher average of intelligence than in Europe, is the prime political power; fixed property and even movable capital being secondary in influence. The interest that depends on uncertainty will not be wanting to political economy in view of these new phenomena.

Colonial policy as regards this country is far from having arrived at the stable position which seemed promised by the steady displacement of the old system during the first three-quarters of this century. The removal one by one of the restrictions on colonial trade by Mr. Huskisson between 1814 and 1825, the abandonment of differential duties, and of the Navigation Act, 1850, seemed to point to an era of complete freedom. But the gradual adoption of protectionist policy by several important colonies has reversed the position by placing barriers, which oppose Great Britain most, because in freedom it is her trade which would naturally be the largest. And so the colonies are drawn into the vortex of the great protection *versus* free-trade agitation. Two parties aim at a new colonial policy: one bases its recommendations on the conception of national economics in preference to cosmopolitan; the other, on the greater amount of real "freedom" which, under present circumstances, would result from freedom within this vast empire of 300 million people, though combined with protection against outside protectionist nations. The means of reaching their goal is the same for both parties, a commercial union of the empire. The opposition has also two parties—the free-traders who prefer the amount of free trade at present in force, with hope that it will by its own virtue continually increase, and so break down barriers both colonial and foreign; and the colonists who severally place their own colonies in the front of their schemes, and are content to be protectionist for their own reasons. On each side, therefore, there is a band of free-traders and a band of protectionists—Mr. W. E. Forster and Mr. Goschen have taken a place side by side with the disciples of List; Sir Thomas Farrer and the Cobden Club are the allies of the protectionists of Victoria and Canada. Meanwhile the bounty of nature, the extension of industrial ideas as determinants of national ambitions and national policies, and the continuous development of science and civilisation, combine to cause a rapidity of industrial progress in British colonies which exceeds all known elsewhere, except in our own ex-colonies, the United States. And in spite of obstructions, and while waiting for general agreement as to the next steps to be taken, the mother-country largely benefits by the industrial prosperity of the outer empire.

For systems on which colonies have been founded, see COLONISATION, SYSTEMS OF.

[The library of the Royal Colonial Institute contains books of reference, statistical publications, and histories, both general and special, to the number of 9500 volumes (catalogue price 2s. 6d., office of the institute), and 219 colonial journals and newspapers are regularly taken, filed for a year, and then deposited in the British Museum. *Statistical Abstracts* for the colonies are published annually by the Board of Trade, and *Returns of Trade and Navigation* monthly. For British colonies see *Historical Geography of the British Colonies*, Introduction, vols. i. ii. (others following), C. P. Lucas, Oxford.—*Official Reports on Colonial Products* (1887).—The *Colonial Office List*, published annually.—*British and Foreign Colonies*, Sir R. Rawson, Statistical Society, 1884.—*Synopsis of Tariffs and Trade of the British Empire* 1888, and *Sequel*, Sir R. Rawson, London, 1889. Articles in the *Proceedings of the Roy. Col. Inst.*, 1874 onwards.—*The Colonies and India*, a weekly journal, London. For HISTORY: Adam Smith's ch. viii. in bk. iv.—Smith's polemic

against the colonial system is criticised by Lord Brougham in *An Inquiry into the Colonial Policy of European Powers*, 1803 (see BROUGHAM, Lord). —Merivale, *Lectures on Colonies and Colonisation, delivered 1839-40-41*, corrected edition, London, 1862.—Payne, *European Colonies*, London, 1877, and Seeley, *Expansion of England*, London, 1882. —Dilke, *Problems of Greater Britain*, London, 1890.—Caldecott, *English Colonisation and Empire*, London, 1891.—These form an adequate library for the preliminary study of colonial history. The *Statistical Abstracts of the Board of Trade* and the *Statesman's Year-Books* supply some economic statistics for foreign countries, revised annually.

FOREIGN WORKS.

FRENCH: Leroy-Beaulieu, *De la colonisation chez les peuples modernes.*—Louis Vignon, *Les colonies françaises.*—Jules Duval, *L'Algérie et les colonies françaises* (all, Librairie Guillaumin, Paris). —J. Rambosson, *Les colonies françaises* (Paris, 1868).—L. Deschamps, *Histoire de la question Coloniale*, 1891. — *Notices statistiques sur les colonies françaises* (Berger Levrault, Paris, 1883). —*Annuaires publiés par chaque colonie.*—*Tableaux annuaires.*—*Revue maritime et coloniale.*—Also *French Colonies and their Resources*, J. Bonwick (London, 1886).

GERMAN: Roscher, *Kolonien, Kolonialpolitik, und Auswanderung* (Leipzig and Heidelberg, 1856).—K. E. Tung, *Deutsche Kolonien*, 1884.—*Deutsche Kolonial Zeitung, organ der D. Kolonialgesellschaft*, Berlin, every Saturday.

DUTCH.—*Bijdragen tot de Taal-Land-en Volkenkunde der Nederlandsch-Indie*, began to appear 1886, 'Sgravenhage.—A copious bibliography of works on Dutch colonies is prefixed to *Catalogue of Amsterdam Exhibition*, Colonial Section (Leyden, 1883).—Information respecting the system of Dutch administration and colonisation in the East Indies and the Cape to the French Huguenot emigration from Europe to South Africa towards end of 17th century is given in *The Voyage of François Leguat, of Bresse, to Rodriguez, Mauritius, Java, and the Cape of Good Hope.* London: printed for the Hakluyt Society.

PORTUGUESE.—Bulhoës, *Les Colonies Portugaises*, 1878.—Martius, *O Brazil e as Colonias Portuguezas*, 3d ed. 1888.—Corvo, *Estudos sobre as Provincias Ultramarinas*, 4 vols. 1883-87.—*Annuario Estatistico de Portugal* (official by the ministry of public works, Lisbon), *As Colonias Portuguezas*, fortnightly; *Boletim da Sociedade de Geographia de Lisbôa*, monthly; *Boletim official da Angola*, ditto, *da Moçambique.*

ITALIAN.—*Bolletino della Società Africana D'Italia* (Napoli, fortnightly).

A *Revue Coloniale Internationale* was issued at Amsterdam with French, English, and German articles in 1885, but lasted only three years; it is of interest as showing readily different points of view.] A. C.

METHODS OF GOVERNMENT. A colony (Lat. *Colonia; colere* to till, to cultivate) may be defined as distant possessions or dependencies of a country; more particularly the word signifies communities of settlers in a new or a foreign country politically dependent on a parent state. Colonies are lawfully acquired by a country in respect of other states either by title of occupancy, or of cession, or of prescription. As to the rules of international law relating to the acquisition of colonies and the disputes which have arisen on the subject, see Hall's *Int. Law*, pt. ii. ch. 2.

According to our municipal law English subjects who occupy a new country carry our common law with them, as far as it is applicable to their circumstances; and the crown, apart from parliament, has no legislative power over them. On the other hand countries acquired by conquest or cession, called crown colonies, retain their own laws till they are altered, and are subject to the absolute legislative control of the crown, except in so far as parliament interferes with the prerogative of the crown in this respect, for over all our colonies and dependencies, however acquired, parliament has supreme legislative authority (cp. Dicey, *Law of the Constitution*, Lecture II.; Todd, *Parliamentary Government in the British Colonies*). Conquered and ceded countries cease to be subject to the legislation of the crown if the crown has granted them a representative legislature.

The government of each colony is carried on in the name of the crown under a governor who is appointed by the crown, and who, in our self-governing colonies is advised by ministers responsible to the legislature, like our cabinet (as to the veto of the governor in respect of colonial legislation, and other restrictions on such legislation, see Dicey, *op. cit.* Lecture III.) The legal supremacy of the imperial parliament over the colonies is only exercised in cases which do not involve any encroachment on the province of colonial self-government.

British dependencies may be either directly under the government of the crown or they may be under the immediate government of a chartered company, such as the old East India Company and Hudson Bay Company, or the British South Africa Company. When the East India Company was abolished, and India was brought under the direct control of the crown, the control of the government was not assigned to the colonial secretary, but to a special secretary of state for India. Hence India is not styled a colony. E. A. W.

CURRENCY IN BRITISH COLONIES. In theory British currency followed the British flag to the New World "plantations," which were the beginning of our colonial empire. In practice, however, it was only the denomination of sterling, and not the sterling coin, which followed the first settlers. With new countries to develop, they required from the mother country not coin, but commodities in exchange for the produce they shipped home. Barter was the common mode of conducting the internal exchanges,—tobacco,

sugar, rum, indigo, wampum, skins, and timber, forming the more usual media. It was not until, with increased production, trade sprang up between some of the British colonies and the Spanish Islands and the Spanish Main, that metallic money began to flow in. This money was Spanish silver (the real and its multiples up to the "piece of eight" reals, see DOLLAR), which the colonists rated in denomination of sterling at arbitrary prices, the dominant rating of the first half of the 17th century being 4s. for the piece of eight, based on the popular currency (Barbados, Bermudas, Jamaica) of the real as a "Spanish sixpence." Clipping and competitive raisings of the local ratings of Spanish silver in the several colonies led, soon after 1650, as a rule, to the 5s.-rating of the piece of eight, which was familiar in England before that date, and which is preserved to the present day as the basis of "Halifax currency"; whilst, by the close of the 17th century a 6s.-rating was partially established both on the mainland and in some of the West India Islands. Meantime, other colonies had adopted the accepted silver-parity of 4s. 6d. for the piece of eight, and in 1652 New England had struck the silver "pine-tree coinage" (1s., 6d., 3d., 2d.) for its own use. Shortly after 1700 complaints of the evils of colonial currency began to pour in on the Board of Trade and Plantations, and in 1704 a royal proclamation was issued fixing the maximum rating of a piece of eight at 6s.-"currency" with other *silver* coins proportionately rated for concurrent circulation. Thus arose "proclamation money," *i.e.* the colonial rating of silver coins at a third above their accepted sterling value. As this proclamation was generally disobeyed ("owing to the liberty that trading men will always take in their own bargains"), the act 6 Anne, cap. 30 was passed, making it felony to pay or receive the specified silver coins above proclamation rates. The result was entirely unexpected, for (1) the West Indian colonies evaded the act by conventionally overrating the *gold* coins of Spain (see DOUBLOON), and so passing in practice to a gold standard; whilst (2) the mainland colonies (now the United States) issued inconvertible and unsecured paper money in profligate profusion. The gold standard persisted in the West Indies into the 19th century; but on the mainland the standard coin continued to be the silver Spanish dollar. In 1739 and 1740, it should be added, the question of colonial currency engaged the attention of parliament, but no practical results followed.

In the years round 1800 the colonial empire of Great Britain, whilst it was diminished by the loss of the United States, was increased by the settlement of Australia, by the gain of the Cape, Ceylon, and British Guiana from the Dutch, and by the capture of Mauritius, Malta, and some additional West Indian Islands from the French. And, further, the decade from 1810 to 1820 witnessed two important changes in the Spanish and British monetary systems. For (1) Spain lost the American colonies from which came the supplies of bullion which had made the Spanish dollar the universal coin for some three centuries; and (2) in 1816 the United Kingdom adopted gold as the sole measure of value, reducing silver coins to the subsidiary position of mere tokens. The now bewildering complexities of the colonial currency systems, the stoppage of the supply of the Spanish dollar, and the novel experience of retaining silver in circulation at home, led the imperial government, after striking rix-dollars (worth 1s. 6d.) for Ceylon, guilders (worth about 1s.) for British Guiana, and "anchor money" equivalent to $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, and $\frac{1}{16}$ of a Spanish dollar for Mauritius and the West Indies, to pass an order in council and proclamation on 23d March 1825, for the purpose of introducing British silver and copper coins into general circulation throughout the colonies. Apart from the fact that tokens representing the standard *gold* sovereign were wholly unsuited to silver-using colonies such as Ceylon and Mauritius, there was the fundamental error in the legislation of 1825 that the Spanish dollar, then worth 4s. 2d. sterling, was rated at 4s. 4d. for concurrent circulation with sterling coins. And, further, no account was taken of the fact that, following the monetary system of Spain, most of the colonies regarded the gold doubloon (sterling value 64s.) as the equivalent of sixteen silver dollars. Consequently British silver was undervalued some 3 per cent as against the dollar, and a further 5 per cent as against the doubloon, with the natural result that the scheme of 1825 was abortive. Taught by experience, the imperial government in 1838 revoked the legislation of 1825, so far as respected the colonies "in America and in the West Indies," and ordained that throughout the West Indies the dollar and doubloon should be rated at 4s. 2d. and 64s. respectively, for concurrent circulation with sterling coins. No limit was placed on the tender of the doubloon, the dollar, or British silver. Consequently, though in the following years the several West Indian Islands formally passed acts assimilating their currency to that of the United Kingdom, the gold sovereign has been unable to circulate in competition with the shilling, and the doubloon has been driven out. The history of currency in the West Indies may here be completed by stating that, when in 1876 the gold-price of silver made it profitable to re-introduce the then practically unknown dollar, acts were forthwith passed demonetising that coin, and leaving the field to British silver coin, and the notes of the Colonial Bank. The exceptions

are (1) the Bahamas, where, by a popular—but not legal—over-valuation of the gold U.S. dollar at 4s. 2d., the practical standard is the gold currency of the United States, with British silver in subsidiary circulation, and (2) British Honduras, where in 1886 the silver dollar of Honduras was made the legal standard. At various times endeavours have been made to induce the West Indies to impose a limit on the legal tender of token silver; but local opinion is not ripe for this reform.

In other colonies the history of currency has no unity except in the principle that, since 1838, "currency areas" have been recognised, *e.g.* Ceylon and Mauritius have been allowed to adopt as their standard the Indian rupee, which dominates the "currency area" in which they are included by virtue of trade-relations, etc.; the currency of Spain has been adopted for Gibraltar; in Hong Kong and the Straits Settlements the Mexican dollar (see DOLLAR) has been established as the proper standard for colonies trading with silver-using China, which recognises no *coin* but the Mexican dollar; and, lastly and chiefly, Canada has adopted the *gold* currency of the neighbouring United States, a weight of fine gold, which is the exact equivalent of the U.S. gold dollar, being the standard of value. Newfoundland stands alone in having a standard (gold) coin peculiar to itself, viz. the two-dollar pieces struck at the British mint. But numerous colonies (Canada, Ceylon, Mauritius, Hong Kong, the Straits, etc.) possess *tokens* of their own. In concluding this brief survey of the history of metallic currency in the British colonies, the most important matter of all remains to be noted, viz. the discovery of gold in Australia in 1850, and the subsequent establishment of the Sydney and Melbourne branches of the Royal Mint in 1853 and 1866 respectively, for the coinage of sovereigns and half-sovereigns (only), which are now legal tender equally with the coins struck at the London mint.

As regards paper currency, space forbids more than the brief mention that, except in the American colonies, there was practically no paper money in circulation in the British colonies before the 19th century; that at the Cape and in Ceylon and British Guiana we inherited a *damnosa hereditas* of inconvertible paper, which under British mismanagement increased in volume, and drove out coin in the first forty years of the 19th century; that during the same period Jamaica and Prince Edward Island debased their currency in a similar fashion; that in Ceylon and Mauritius government note-issues have been established, which are fully secured, and have at least one-third of the reserve in coin; that the modern policy appears to be to ensure (always in the case of new issues, and as far as possible in the case of existing issues) the two essentials of security and convertibility, leaving it open whether the issue shall be by the government or by a bank. But much of the paper which circulates in the British colonies is not adequately secured.

The following is a classified list of the colonies as regards currency:—

I. STERLING STANDARD.

(*a*) With 40s. limit on silver:
Australasia, the Cape, Natal, British Bechuanaland, Fiji, St. Helena.

(*b*) With a £5 limit:
Malta.

(*c*) With no limit:
West India Islands, British Guiana, West African Colonies, Falkland Islands.

II. NON-STERLING STANDARD.

Gold.
(*a*) U.S. gold dollar:
The dominion of Canada (sovereign legal tender at $4·66).

(*b*) Newfoundland gold dollar:
Newfoundland (eagle and sovereign legal tender).

(*c*) Spanish (Latin Union) "bimetallic" standard:
Gibraltar.

Silver.
(*d*) Mexican silver dollar:
Hong Kong, the Straits Settlements, Labuan, British North Borneo.

(*e*) Indian rupee:
India, Mauritius and Ceylon.

(*f*) Honduras dollar:
British Honduras.

[*The Currency of the British Colonies*, anon., London, 1848.—*Early Coins of America*, Crosby, Boston, 1878.—*Conference Monétaire Internationale de 1878*, Paris, 1878.—*The Money of the British Empire*, by Mr. A. Leslie Probyn in *Vol. XXI. of the Proceedings of the Royal Colonial Institute*, 1890.—*Coins of British Possessions and Colonies*, Atkins, London, 1889.—The acts of the several colonies, colonial histories, and pamphlets of the 18th and 19th century, dealing with currency in individual colonies, and particularly, the valuable MSS. in the record office.] R. C.

DENOMINATIONAL CURRENCY. In connection with colonial currency the term DENOMINATIONAL CURRENCY requires explanation. It has been used by writers of repute; but it is illogical and unscientific, and it would be desirable to get rid of it. In transactions with many of the English colonies, especially the North American and West Indian colonies, even as late as the middle of the nineteenth century, the term "currency," as opposed to "sterling," was well known; and perhaps "currency," in a strictly limited and almost local sense, without a defining, or rather a confusing, epithet, is the simplest name to adopt for the state of facts which we proceed to explain.

"Currency," so used, is found to import the current use, in account, of the denominations of a standard coinage to represent values widely

differing from the standard, mostly due to the mis-rating of coins foreign to the standard.

The original colonists of the Americas naturally adopted in their new home the denomination of money with which they were familiar, and made it their money of account. At first their transactions were almost entirely in commodities. When coins became in request, those which came to them were foreign coins, chiefly Spanish and Portuguese (*v.* CURRENCY IN BRITISH COLONIES). They consequently attempted to adapt these coins to their familiar denominations of account, in other words, to rate them to the pound. This rating was incorrect; it varied in different colonies, and was often made worse by further attempts to correct it. Hence a pound's worth of dollars, according to local rating, was a very different thing from the number of dollars equivalent in intrinsic value to the pound sterling; and it usually fell considerably short of that equivalent, as was shown by the high rates of exchange which prevailed against the American and West Indian colonies for many years. The £ s. d. in which the colonists reckoned did not correspond in value either with those denominations in the sterling of the mother country or with similar denominations in neighbouring colonies. There thus existed a number of differing pounds of account, each of which came to be known locally as a "currency pound."

Similarly in Ireland, during a good part of the 18th century, the moidore was the prevalent coin apart from debased half-pence and farthings, and Irish "currency" was in the same position as that of the Plantations. The same state of facts, however, is not likely to be repeated except in the dependencies of a dominant country. C. A. H.

GOVERNMENT OF COLONIES BY COMPANIES.* Adam Smith, in a passage which has been quoted with approval by at least one modern writer of authority, states that "the government of an exclusive company of merchants is perhaps the worst of all governments for any country whatever." The statement, if it were unchallenged, would stand for ever as a condemnation of all past or present projects conferring territorial sovereignty on a company. But this dictum of Adam Smith's is somewhat too sweeping and somewhat out of accord with the facts. So far as it is good, it needs elucidation.

The possession of territorial sovereignty by private individuals or companies, the subjects of some supreme government, is apparently associated with a special set of conditions. It has rarely been found except at those times and in those parts of the world in which rival nations have been actively competing for new trade or settlements. In the 17th century, when the power of Spain was broken, and English, Dutch, French, and Danes were rushing in to share the spoil, the method which national caution dictated to the new comers was that of the chartered company; and the early history of North America, the West Indies, and Guiana is virtually the history of many such companies; the rest of South and all Central America was too secure in the hands of Spaniards and Portuguese to offer a field for rivalry. The struggle for the trade of the East was a struggle of companies. The latter half of the 18th century was a time of continual fighting; the nineteenth century was a time of recovery and development on the lines settled by that fighting; little place was left for that rivalry in new fields which produced the privileged companies; Australia was the great addition to the world in this period, and there was no question who should colonise it. But when Africa was suddenly presented to the world as the great prize open to all nations, the chartered company once more came into prominence.

The encouragement of such companies springs from the timidity or caution of governments. Companies rush in where the messenger of government fears to tread. If they succeed, the government of their country gladly supports them, and may ultimately reap the fruits of their labours; if they fail, no blame is taken by the government. If their actions prove premature or inconvenient they can be disavowed, the company being made a buffer to ease off friction or conceal the reality of some blow at a rival.

Not that acquisition of territory or the government of a new domain has been the original aim of any of these companies. In ancient and modern instances alike the profits of trade have been the guiding motive in their formation. Certain arrangements for the preservation of order have been included in the charter, and formed the germs of any government which afterwards grew up. It will be found that in their essence there is no difference between the chartered company of the 17th century and that of 1890. All through the document on which they base their rights the prominent idea is the security of their business; all through the history of their operations their real anxiety is the development of their trade. The real difference between ancient and modern companies is to be found in the extent of their commercial privileges and the influence of modern conscientiousness or timidity.

It will be useful for reference, and will illustrate the activity of enterprise in the 16th and 17th centuries, to give a list, which is at least approximately complete, of the numerous companies which obtained charters for exclusive trade in nearly all the known quarters of the globe previous to the 19th century.

The Merchant Adventurers' Company appear to have been the first body of men from any

nation who obtained a charter (dated in 1564) for foreign trade. The Muscovy Company was probably next, and its charter is quoted as a precedent for others, *e.g.* for the Company of Cathay, which received its charter in 1576. The Turkey Company was formed about the same time: the Company of Adventurers for Guinea and Benin, followed ten years later. The East India Company of London was incorporated in 1600, and thus preceded by three years the great Dutch Universal East India Company, which was destined to drive it into difficulties out of which arose the only company (commonly known as the British East India Company), which became a mighty territorial sovereign. The governor and company of Merchants of London for the discovery of the North-West Passage were incorporated at this period. And the first half of the seventeenth century was rich in companies, the majority turning their eyes towards America. The Virginia Company, the Bermuda Company, the Newfoundland Company, the first African Company (which was reconstituted four times), the Dutch West India Company, an Amazon Company, a Guiana Company which never did anything, the New England Company, the Providence Company, the Canada Company, the Massachusetts Bay Company, the Nova Scotia Company, rapidly succeeded one another. There were also the French East and West India Companies—the latter known as the Company of the Islands of America, and Canada Company formed during the same period; an English West India Company was projected but never became a reality. Most of the charters granted after 1650 are reconstitutions of old companies on a new basis, as in the case of the New Royal African Company. Charles II.'s reign teems with such new grants. The Hudson's Bay Company's first charter was granted in 1670.

An alternative method of encouraging colonisation, which must be noticed here, was the grant to a body of lords proprietors, or sometimes to a single lord. All the British Caribee Islands were so granted in 1627; Maryland in 1669; the Bahamas and Carolina in 1670. In the case of these grants there seems to have been a clear understanding that the sovereignty rested with the crown; whereas the companies merely reserved a fixed nominal tribute to the sovereign in case he should come into their dominions; and when, as in the case of Virginia, the Bermudas, or more recently India, the Crown was required to intervene, a suspension or complete alteration of the charter was necessary.

It is well to mention the notorious South Sea Company, early in the 18th century. And the list of older companies is closed towards the end of that century by a new departure in economic history, a politico-philanthropic settlement, namely the Sierra Leone Company.

The old charters and grants which conceded their rights to the above-named companies or to lords proprietors were very much on the same lines and often almost in identical terms. Apart from arrays of names and verbiage, they were simpler documents than any recent charters. The monopoly, their *raison d'être*, the "sole privilege to pass and trade" to certain places is the leading provision in all. The necessary powers for securing the enjoyment of that privilege of trade and of the assigned territory are given, and this carried a right to exact customs duties from traders not members of the company. A governor and court of directors were usually instituted, and empowered to make laws, levy fines, and imprison. In some cases full jurisdiction of life and death is conferred, together with the power to declare martial law; in others power to make peace or war with heathen natives is also delegated; in one case (the Amazon Company) we find mention of "all customary privileges for sending ships, men, ammunition, armour, and other things." Provisions regulating the admission of members are usual, and the term of duration is commonly limited to a moderate period, though in the case of the Royal African Company it was for 1000 years. Briefly, the old charters regarded two things: 1st, the monopoly of trade; 2d, security against intruders or foreign foes. They were somewhat vague in language, and left each company to work out its own development according to circumstances. No kind of supervision by the supreme government was suggested; but in some cases a right of interference was preserved by the curious legal fiction of making the area of the grant a part of an English borough, not unfrequently Greenwich.

It was a part of the policy of the companies to induce settlers to go out to their lands, and to keep these settlers in a kind of tutelage; if this was necessary to their first success, it was also essentially the cause of their troubles. The government of a few individuals who while attracting free settlers directed everything avowedly for their own profit, and denied the right of those settlers to enjoy the fruit of their own industry, was clearly indefensible. The operations of all the companies which made something of a permanent start, such as those of Virginia and Bermuda, were very early disturbed by complaints of their monopoly. Deprivation of profits bred discontent; discontent proved difficult to handle. The domain of the company often became a scene of confusion; and discredit was cast not only on its monopoly, but upon its power to govern. It was this condition of affairs which Adam Smith reprobated; but the real root of the evil here was the exclusive privilege operating injuriously to others of the same race and ambition.

Government in the proper sense did not greatly enter into the schemes of any companies,

In most cases the disputes just referred to began so early in their history, and became so serious, that all future responsibility for the government really rested with the crown, which gradually absorbed the area of its own grant. Such was the case of the Virginia Company in 1624, some eight years after it was incorporated; the question of reform was mooted by the proposal to renew the charter for trade only, "but not for the government of the country, of which the king will himself take care." In 1631 this plan took final shape, the protests of the "adventurers" delayed it, but they could not stifle the voices of dissatisfied Englishmen; the administration of the company's territory fell in to the crown, and the company paid the charges.

In one notable instance, under a special set of circumstances, a government of remarkable power and energy grew up almost against the will of the administrators. The British East India Company started with no ambitious scheme of government; they were content to have established their factories on the coasts of the Carnatic and Bengal, provided they could oust their foreign European rivals from the trade. The intrigues of the French forced them to fight, first for their existence, afterwards for quiet possession; the flame of war once lighted was not easily quenched; the brand had fallen amongst a restless and inflammable people; the small band of the company's servants had to choose between conquest and death. The man for the hour was at hand; success followed Clive's arms, and a British company became the lords of a vast empire. In this case the climate and distance had confined the numbers of adventurers of British race to but few besides the company's own servants or licensees; the directors were hardly hampered by internal discontent, and the objects of their earlier administration were a people who expected to be ruled.

It would have been a strain on any nation to support the continued wars which for nearly half a century taxed the resources of the great East India Company; it was natural that support from the government should be asked for, and that its enjoyment should be accompanied with some measure of control. Nevertheless the government of India, even after the institution of the Board of Control in 1784, was in reality the government of the company; and that it was enlightened and careful, that it gradually handled with success the most difficult problems which confronted it, that it swept away great national evils such as child-murder and thuggism; in short, that it was conducted by a peculiarly able set of Englishmen on the lines most approved at home, will hardly be denied. The rule of the company came abruptly to an end in 1858, not so much because it was proved a failure, as because a greater crisis than ever had arisen, and the interests of all classes in this country had become bound up with the possession of India, so that the sense of national responsibility was stronger than before.

What the East India Company did in the old world the Hudson's Bay Company partly accomplished under quieter conditions in North America, laying the foundations of two great provinces of the Canadian dominion. The same thing might have been done by many of the old companies had conditions been equal. Indeed, as Mr. Merivale suggests of the Dutch India companies, the government of a company in those days was likely to be more generally beneficial than that of a nation. There was greater regularity and economy of administration; a sharp check was kept over employés; if the court of directors itself wished to tyrannise or squeeze, it at least kept its subordinates in order. It is true that Adam Smith draws an exactly opposite picture; but it will be admitted by all who read history fairly that this great man was blinded by his hatred of monopolies of all kinds, and failed to give credit even where credit was due.

The weak point of a company's government was apt to be in its external relations. On the one hand was the fear of embroiling itself and its nation; on the other the reluctance to throw away money. This is excellently illustrated by the later history of the Dutch West India Company in Demerara and Essequibo. The Spaniards were constantly encroaching without warrant on the limits of the Dutch colony; the Dutch governors were eager to drive them off once for all; but the company, partly actuated by its anxiety not to cause a national breach, partly avowing the need of economy, declined to take a step which might have saved endless trouble afterwards.

The fact is that to govern with capacity a company must first be rich. It is chiefly this which Mr. Merivale has in mind when he states that the prosperity of companies declined as soon as they substituted empire for trade. Sovereignty brought large establishments and lavish expenditure. Because the means failed it is not a fair inference that the administration of trading companies is inherently rotten. The monopoly of the old companies produced factitious prosperity; this led them on to extravagance; and in but few cases could they withstand the simultaneous undermining of their monopoly and the unexpected strain of their own engagements.

The Sierra Leone Company at the beginning of the 19th century is hardly a fair example of the trading company. Its operations were mixed up with philanthropic interference, which is proverbially unbusiness-like. And after all, its government was hardly less successful than that of the West African colonies under the British crown.

The Sierra Leone Company was the last of the

older attempts to make a trading company self-administering. The charter of the Falkland Islands Company was purely a trading charter. A colonial government had been established before Mr. Lafone obtained his grant. No positive monopoly was granted by the charter; the company was empowered to carry on operations for taming wild cattle and breeding stock, for establishing whale and seal fisheries, to enter into any sort of trade with the islands generally, and to contract for the performance of any services either to the government or individuals. These objects were not such as to demand a charter, the only practical aim of which appears to have been to give prestige; the effect, however, has been to create a monopoly in that distant colony which is bitterly assailed by the few independent islanders.

The Sombrero Phosphates Company, for several years up to 1894, held the island of Sombrero in the West Indies under a lease which made the lessees responsible for the maintenance of order amongst their employés and any other inhabitants: so far it created a small dependent government.

But broadly speaking, except that the East India Company lived on, ever approximating to state government, it may be said that colonisation by chartered companies dropped into abeyance in the 18th century, and that after a lapse of nearly a hundred years the system suddenly burst again into life in the charter of the British North Borneo Company.

This charter was the first, and the example, of the modern grants. It was the result of a number of concessions in the same district coming into the hands of one man and forming a responsibility which he could not bear alone. The revival of the idea of a chartered company was not unnatural, in view of the extent and delicacy of the interests concerned. But the precise stipulations of the new charter gave it a stamp widely different from that of the old grants.

The German New Guinea Company was the next in the field. And the Royal Niger Company, the Imperial British East Africa Company, and the British South Africa Company, all received charters on the new British model within the space of three and a half years; all three absorbing individual and competing interests which the government of Great Britain was disinclined to support. The German East African Company followed in the steps of the British Company of similar title.

Modern philanthropy and respect of human life, the natural timidity of governments, and the special caution which characterises that of Great Britain, have laid an indelible mark on the new British charters. There is, of course, no exclusive enjoyment of trade; on the contrary, monopolies are carefully prohibited; but there is the exclusive right to grant concessions within the territory assigned, and to deal with it for the company's advantage; power is also taken for the establishment of any kind of business. At every point the control of the crown, through one of the principal secretaries of state, is jealously reserved; without reference to him no transfer of territory can be made, no dealings with native or foreign powers are final. The discouragement of all slavery and of the liquor traffic is specially enjoined; interference with native religions is forbidden; consideration of the customs of natives is required in the administration of justice.

As already suggested, it is in these precautions that the real difference between the older and modern grants lies. It is nothing more than the difference of the spirit of their age. Both contemplate the necessity of administration, and make some sort of provision for it. But in the older cases a free hand is left to the directors; in the modern every precaution is taken against collision with foreign states or oppression of native races. There is no foundation for any attempt to differentiate ancient and modern chartered companies by the extent of their administrative purpose. This has always been the creature of circumstance, and in the thirty years of its active administration the British South Africa Company has gone some way towards rivalling the success of the British East India Company.

A real difference in regard to method of government is found between the British and Dutch companies on one side, and the French and German companies on the other. The distinction applies alike to old and modern charters. The Britons and the Dutch are above all things traders, and traders who rely on their own resources; their charters are for trade, and the companies are left to stand or fall by themselves; intervention of the national government closes the company's rule. The French and Germans carry with them their fatherland; the imperial power must be close behind them; the sovereignty of their companies is the delegated sovereignty of the supreme government; the administration of justice and certain executive functions rest directly with the government; and all foreign relations are controlled by it. The German New Guinea Company and the German East African Company were veiled forms of the German government, hence the warships and bombardments which marked their operations.

The progress of the companies directly supported by their governments is at first more obtrusive; avowed dominion by the national government must come more rapidly; and, in the case of nations like the Germans and French whose policy is exclusive, this involves restrictions affecting the world. On the other hand the real grip of a district, which is the foundation of good administration, may never

come by this method. By the British plan the ground is carefully prepared for empire first; if the project is successful, there is little question that colonial government will take firm root, when its time comes at last.

If we have dealt chiefly with British companies it is that in British hands the chartered company has been most widely and successfully used. In its latest form the British chartered company is shorn of every objectionable feature. It may be a great pioneer of trade and confer lasting benefits on districts which might otherwise suffer from a selfish policy. But the government which encourages fresh companies must be prepared eventually to administer a new territory; and this position has received pointed illustration in the recent history of Rhodesia.

See also in Appendix, COLONIES: GOVERNMENT OF, BY COMPANIES.

[The *locus classicus* on the subject is Adam Smith's excellent chapter bk. iv. ch. vii. and esp. pt. ii. See also Sir G. C. Lewis's essay on *The Government of Dependencies*, circa p. 143.—Merivale's *Colonisation and Colonies* pp. 50-60 (ed. 1861).—*The Calendars of State Papers* (*Colonial*) (1574-1674, 3 vols.) are a mine of history, and Mr. Sainsbury's prefaces are useful.—Sir W. Kaye's *History of the East India Company* is one amongst many works on that subject. A sketch of the Dutch West India Company is found in Motley's *United Netherlands*. References to other special companies are scattered; but for the Hudson's Bay Company consult Parl. Paper 547 of 1842; and for recent charters the *London Gazette* of 8th November 1881 (British N. Borneo), 13th July 1886 (Royal Niger), 7th September 1888 (Imp. Brit. E. African Co.), 20th December 1889 (Brit. S. African Co. Correspondence respecting Southern Rhodesia and the South African Co. presented to Parl., 1923.)]

[See AFRICAN COMPANIES, EARLY; AFRICAN COMPANIES, RECENT; EAST INDIA COMPANIES, BRITISH.] C. A. H.

SYSTEMS OF COLONISATION. In its economic or industrial aspect, colonisation must be deemed the outcome of modern necessities and the offspring of modern instincts. The settlement of colonies took place, indeed, in early times, but it proceeded usually in ways and from causes other than those recognised by modern systems. With the Phœnicians, colonies were little else than trading stations; to the Greeks they represented more, being founded oftentimes in response to political exigencies; the Roman colonies, united to the mother state by a common bond of citizenship, while at times little more than military settlements, were at times again a means of relieving distress or discontent. Nor was there any sign of conscious colonisation even at the close of the Middle Ages, when the discovery of America threw open a new world to Europe. About that time two chief motives led to settlements beyond the borders of the country or city whose citizens formed the new inhabitants. 1. The desire to form trading stations, as, for instance, in the cases of Venice and Genoa in the Mediterranean, of Spain and Portugal in the new world, and afterwards in the case of companies, such as the East India Companies. 2. The desire for adventure resulting at times in settlement. During the 16th and 17th centuries, the first of these objects met with encouragement from the new school of statesmen as Lord Burghley and Oliver Cromwell in England, Richelieu and Colbert in France. In the case of the former country, too, political conditions and love of adventure combined to add the notion of settlement to that of trade. There was, however, no conscious regulation of the new settlements with a view to their rapid industrial development. *Colonisation*, in its true sense, was unknown, whether the system adopted was proprietary or more immediately dependent on the crown. The growth of a system of colonisation may be best traced in the history of the British colonies. Here, indeed, relations of the colony to the mother country were fully recognised, especially by such measures as the NAVIGATION ACTS (*q.v.*) The system thus inaugurated was that of political freedom, but commercial restraint for the advantage of the mother country. An attempt to interfere with the former led to the loss of the American colonies, and in consequence to a change of policy. The colonies were governed more from home, but every encouragement was offered to their commercial development, as the effect of the trade restrictions (differential) imposed on both sides was to confine colonial products to the most important market in the world, though this might have the effect of limiting the sources from which England might derive her supplies of raw material. Thus matters stood at the beginning of the 19th century. In reality there were four points on which a decision had to be arrived at:—1. The position of the colony as an outlet for the rapidly increasing home population. 2. The settlement of this population so as to promote best the development of the colony. 3. In consequence, the political relations of the two countries. 4. The commercial relations of the two countries.

The first two of these are those which relate most closely to the subject of colonisation, the others being in part their consequence, and from their nature involving a consideration of general administrative and commercial policy.

The colonies were supplied with immigrants from home, but these being in general either convicts or paupers (cp. Wakefield, *Art of Colonisation*, Letter xxi.) were of doubtful advantage. In the next place, the new population, enticed by the offer of free grants of land, spread themselves over a larger surface than they had capital to cultivate. In 1829 the

system of free grants was opposed by Edward Gibbon Wakefield (*Letter from Sydney*, by R. Gouger) and in 1830 the Colonisation Society was formed. Its members attacked the system of transportation, and their accusations were confirmed by the report of the select committee in 1838, soon followed by the cessation of transportation.

Meantime the efforts of Wakefield were concentrated on the second of the two questions. Labour was needed on the land. It must be restrained from undue diffusion. When the need of labour had been felt at a much earlier date in the American colonies it had been met, in the southern states at least, by the employment of slaves. This remedy was out of the question. Now Wakefield proposed to cope with the matter by a reconstruction of the system according to which the public lands were disposed of. Free grants were to be abolished and the land to be sold at a price determined according to the circumstances of the case. It was further proposed to apply the proceeds to the promotion of immigration, and also to the improvement of the means of communication (cp. *Reign of Victoria*, vol. ii. pp. 405-408). The important principle was that of the sale of land at a *sufficient* price. So far as the substitution of "sale" for "free grant" was concerned, it was adopted by the instruction of 1831, with reference to Australia (Grey, *Colonial Policy*, letter vii.), advocated in the Durham report and given full effect to by the Australian Land Act of 1842. But when it was attempted to put the plan more fully into practice, a difficulty occurred in the interpretation of the term "sufficient." This was shown in the history of the efforts of the South Australian Company (cp. Wakefield, *Art of Colonisation*, letter ix. and also despatch by Sir George Gipps, *Parl. Papers*, 1843, No. 323).

The efforts of Wakefield were in fact directed to the discovery of means whereby capital and labour might be introduced into the colony in such a manner and in such proportions as to lead to its more stable development. For the fullest accounts of his system, see *The Art of Colonisation*, by E. G. Wakefield; *Lectures on Colonisation*, by Herman Merivale; *Colonisation avec les peuples modernes*, par P. Leroy Beaulieu. The two latter works are extremely critical in nature, though perhaps the most searching criticism of all is to be found in the above-quoted despatch from Sir George Gipps.

It remains to consider the effect of colonisation on the home country. Its condition may be affected directly or indirectly—directly by the loss it sustains of population and capital, indirectly by the consequences involved in the development of a colonial trade. The question of emigration has attracted and continues still to attract a considerable amount of attention. While there must be considerable difference of opinion as to the benefit it confers, the three following propositions may be regarded as established. 1. It cannot be a *permanent* safeguard against over-population. 2. Unless concurrent with an increase of prudence in marriage and a rise in the standard of comfort, it can ameliorate but little the condition of the working classes from whose number the emigrants are theoretically drawn. 3. It is highly beneficial in relieving the congestion which from many incidental causes has taken place in particular districts.

The exportation of capital, implying as it does the employment of such capital in circumstances more favourable than would have been the case at home, prevents the rate of interest, from falling. (For this and for its other effects see Merivale, *Colonisation*, Lecture vi.)

The development of the colonial trade which involves the same better distribution of energy, has in consequence a beneficial effect on the condition of the people in the home country (see COLONIAL POLICY).

[Works cited in text, and more particularly, H. Merivale, *Lectures on Colonisation*. — P. Leroy Beaulieu, *Colonisation chez les peuples modernes*; Roscher, *Kolonien, Kolonialpolitik und Auswanderung*.—Colonel Torrens, *Colonisation of South Australia*.] E. C. K. G.

COLQUHOUN, PATRICK (born 1745, died 1820), lord provost of Glasgow, police magistrate in London, in the course of an active life contributed to social science some thirty publications; among which may be distinguished: (1) *Treatise on the Police of the Metropolis*, 1795; (2) *Treatise on Indigence*, 1806; (3) *Treatise on the Population, Wealth, Power, and Resources of the British Empire . . .*, 1814. Sir R. Giffen, in his *Growth of Capital* (p. 101), utilises Colquhoun's estimates of national wealth; and, while admitting that "many of his details are fanciful," considers that "he was most unjustly decried by M'Culloch" (*Ibid.* p. 50). Colquhoun himself confesses that his statistics are not accurate: "all that is attainable is approximating facts," he pleads. His general remarks are often sound; for instance, advocating savings banks, "The great desideratum in political economy is to lead the poor by gentle and practicable means into the way of bettering themselves." He has just views on the education of the poor (*Indigence*, ch. v.), and on the growth of the population (*Wealth, Power, and Resources*, ch. i.) On currency he is less happy (Letters to Dr. Boase, *Brit. Mus. Addit. MS.*, 29,281).

[In a *Biographical Sketch . . .* by Ἰατρός (Colquhoun's son-in-law, Dr. Yeats) there is a catalogue of Colquhoun's publications. It does not include *Considerations on the means of affording profitable employment to the redundant population of Great Britain and Ireland*, published anonymously 1818 (Lowndes).] F. Y. E.

COLTON, Rev. Calvin, born in Massachusetts 1789, died in Georgia 1857. At first a Presbyterian clergyman, he soon entered the ministry of the Protestant Episcopal Church. This he relinquished for journalism, and in 1852 became professor of political economy at Trinity College, Hartford, Conn. He advocated very strongly the policy of protection to home industries, and was a devoted follower of Henry Clay. He wrote works on travel, and on religious and political subjects. Among his economic works are *The Crisis of the Country*, 1840.—*The Junius Tracts*, 1843-44.—*The Rights of Labour*, New York, 1846, pp. 96; and a more extensive work, *Public Economy for the United States*, New York, 1848, pp. 536. He edited the works of Henry Clay, and in all his economic writings dwells principally upon the theme of protection. D. R. D.

COLWELL, Stephen, born in Virginia 1800; entered on the practice of law in his native state; early removed to Pittsburg, and relinquished his profession to become an iron merchant in Philadelphia, where he lived the remainder of his life; died 1872. He devoted much time to the study of political economy, wrote largely for the periodicals of the day, and associated himself with the protective party. Among his more extended writings may be mentioned *The Relative Position in our Industry of Foreign Commerce, Domestic Production, and Internal Trade*, Philadelphia, 1850, 8vo, pp. 50; and an American edition of Frederick List's *National System of Political Economy*, Philadelphia, 1856, pp. 497, for which he wrote a preliminary essay, pp. lxxxiv. His best known work is *The Ways and Means of Commercial Payment*, Philadelphia, 1858, in which he attempts a full analysis of the credit system, with its various modes of adjustment; he argues that a mistake has been made in previous analyses in not making a radical distinction between money of the precious metals and forms of credit; the historical inquiry into the growth of the credit system is of considerable value, and the whole work exhibits independence of thought; he did not accept the view that the quantity of money is the controlling factor in determining prices. His other writings of economic interest are, *The Claims of Labour, and their Precedence to the Claims of Free Trade*, pp. 52, 1861.—*Gold, Banks, and Taxation*, pp. 68, 1864; and *State and National Systems of Banks, Expansion of the Currency, the Advance of Gold, and the Defects of the Internal Revenue Bill of June 1864*, 8vo, 1864. At the close of the civil war in 1865 he was appointed a member of the revenue commission, and in 1866 made a valuable report on taxation. In this document Colwell's special reports are upon *The Influence of Duplication of Taxes upon American Industry*; upon *Relations of Foreign Trade to Domestic Industry and Internal Revenue*; upon *Iron and Steel*; and upon *Wool and Woollens*. He also elsewhere made reports upon *High Prices and their Relations with Currency and Taxation*, 1866.—*Over-Importations and Relief*, 1866.—*Financial Suggestions and Remarks*, 1867, pp. 19. See *Memoir* by Henry C. Carey, Philadelphia, 1871, pp. 35, in which (p. 32) will be found a list of writings, thirty-two in number. D. R. D.

COMBINATION. Combinations for the purpose of controlling the production, exchange, and distribution of wealth, have assumed so many forms that it is only possible here to give an outline of the subject—the reader being referred to other pages for a detailed examination of each class.

I. Production. Some forms of wealth can only be produced by the assistance of large capital, and in some industries production on a large scale is distinctly economical (Mill's *Polit. Econ.*, bk. i. ch. ix.) Hence capitalists have united in various combinations recognised by law:—

(1) *Partnership.* Where two or more persons agree to combine property, labour, or skill in business, and to share the profits between them.

(2) *Company.* Where a number of persons are incorporated into a company either under act of parliament or by charter from the crown, the liability of members being either limited or unlimited (see Companies).

Combinations of producers have also been formed with the object of controlling the production of some one or more commodities so as to secure if possible a monopoly of production. The following types of this method may be mentioned:—

(1) *Pools.* Where a joint committee of delegates from several producing establishments control the production (see Pools).

(2) *Syndicates.* Where one firm or company agrees to take all the produce of other firms in the same business at fixed prices: the amount of the produce being often limited by agreement. The copper syndicate formed by the *Société Industrielle et Commerciale des Métaux de Paris* is the most famous of this class.

(3) *Trusts.* Where the stockholders in several corporations transfer their shares to trustees, who become registered in their places as owners of the stock and so obtain complete control of the management. Usually the shareholders receive trust certificates in exchange for their shares. The complete legality of such a proceeding has been maintained (*Polit. Sci. Quarterly*, Dec. 1888), but in at least one American case it has been held that a corporation whose members enter into such a trust forfeits its corporate character (see Trusts).

Companies are sometimes formed with the object of establishing a monopoly of production, by buying up the business of all persons engaged in the trade. The Salt Union which

has purchased many of the salt properties in England and Ireland is an example of this class.

Various forms of combinations are found to exist between sellers and buyers:—

(1) Wholesale firms are frequently bound by agreement with their customers (retail dealers) not to sell except to retail firms.

(2) Distributors or intermediate dealers, often combine to buy at a low price from producers and to sell at a high price to consumers. The milk exchange of New York bought milk at two to three and a half cents per quart and sold it as high as seven or ten cents.

(3) Combinations or agreements between seller and buyer that the latter will sell again only at a certain price are very numerous in America, though such agreements have been declared illegal.

In a separate class may be placed the combinations entered into by carrying companies either to secure if possible a monopoly of traffic or to prevent competition by agreeing on a scale of rates and charges.

[For examples of these various forms of combinations see *Report of Committee of State of New York upon Trusts*, 1888.—*Report of Committee of Canadian House of Commons on Combinations regarding manufacture or sale of Products*, 1888.—*Quarterly Journal of Economics*, 1889, Boston, vol. iii. No. 2.—*Political Science Quarterly*, 1888, New York, vol. iii. Nos. 2, 3.—Sidgwick, *Polit. Econ.*, bk. iii. ch. x., and Marshall, *Principles of Economics*, bk. v. ch. viii., discuss the theoretic aspects of monopolies.—Cournot's treatment of the abstract theory of monopoly (*Recherches*, ch. v. *Du Monopole*) has influenced most subsequent writers. Much light is thrown both on the theory and facts of the subject by the following: Hadley, *Railway Transportation*.—C. W. Baker, *Monopolies and the People*.]

II. Distribution. In all the leading industries the employers and the employed have formed their respective associations for the protection of their own interests. The terms upon which the labourer is to give his services are not arranged by him and his employer individually, but by the respective associations to which they belong. Mill, regarding wages as paid out of capital, did not think that combinations of working men could raise wages without adding to capital; but more recent economists look on wages as a share of the produce, and admit that by combination wages may be raised (Sidgwick's *Polit. Econ.*, bk. ii. ch. x.; Marshall's *Economics of Industry*, London, 1879; and *The Principles of Economics*, 1891; Walker on *Wages*. See Trade Unions).

Combinations on the part of labourers to obtain higher wages or shorter hours of labour are not illegal, but it seems that a combination of tenants to obtain a reduction of rent may, under certain circumstances, amount to an illegal conspiracy.

III. Production and Distribution. In order to avoid the conflicts that arise between employers and employed different forms of "profit sharing" have been tried (see Co-partnership, App.), the employer agreeing to hand over to the workers, in addition to their wages, a share of the profits (see Profit Sharing).

IV. Distribution and Consumption. In order to secure to consumers the profits made by distributors, various forms of co-operation have been introduced in which the capital is subscribed by the consumers. This idea has been specially successful in saving to the consumer the profits of the retail dealer by the establishment of co-operative stores, and there is a growing tendency to apply the same principle to actual production (see Co-operation). J. E. C. M.

COMBINATION LAWS. The object of these laws was to enforce the provisions of the statutes of labourers of Edw. III. and of Elizabeth which authorised the justices in quarter sessions to fix wages. One of the first acts, 3 Hen. VI. c. 1, recited that the yearly confederacies of the masons tended to destroy the force of the statutes of labourers (see Labour Statutes). In 1548 a more general statute was passed (2 & 3 Ed. VI. c. 15) which prohibited all conspiracies and covenants not to make or do their work but at a certain price, under penalty, on a third conviction, of the pillory and loss of an ear. In subsequent years the following acts relating to particular trades were passed prohibiting combinations for raising wages or reducing the hours of labour in the trade, viz. 7 Geo. I. c. 13 (journeymen tailors); 12 Geo. I. c. 34 (wool trade); 22 Geo. II. c. 27 (hatters); 17 Geo. III. c. 55 (silk weavers); and 36 Geo. III. c. 111 (paper trade).

In 1799 a general act was passed, but it was repealed and replaced in the following year by 40 Geo. III. c. 60, which prohibited all combinations for obtaining an advance in wages or lessening the hours of work. This act applies in the most detailed, specific, uncompromising way the principle upon which all the earlier legislation had depended.

The first attempt to modify this system of legislation was the 5 Geo. IV. c. 95, which repealed all the previous statutes so far as they related to combinations of workmen, and declared that persons joining combinations of workmen for obtaining an advance in wages or lessening the hours of labour, or for other specified purposes, should not be liable to any prosecution for conspiracy. The act was considered to have encouraged combinations for objectionable purposes, and in the following year (1825) replaced by 6 Geo. IV. c. 129, which rendered men liable to punishment for the use of threats, intimidation, molestation, and obstruction directed towards the attainment of the objects of trade unions. A few alterations in the act were made by 22 Vict. c. 34. The recommendations of the royal commission

of 1867 on trade unions led to the repeal of the 6 Geo. IV. c. 129, and the 22 Vict. c. 34, by the 38 & 39 Vict. c. 31, and the 38 & 39 Vict. c. 32, which declared that the purposes of a trade union were not to be deemed unlawful by reason merely that they were in restraint of trade, and carefully defined what acts should be deemed criminal offences. The protection afforded by these acts was greatly diminished by the gradual extension of the common law doctrine of conspiracy, and at length, in 1875, the act was repealed and replaced by the Conspiracy and Protection Act, 38 & 39 Vict. c. 86.

Now by the Trades Disputes Act, 1906, c. 47, an agreement or combination by two or more persons to do, or procure to be done, any act in contemplation or furtherance of a trade dispute is not indictable as a conspiracy if such act, committed by one person, would not be punishable as a crime.

If no trade dispute is in existence or contemplation, it is an actionable wrong to interfere without legal justification with lawful contractual relations; otherwise even picketing, when peaceful, is legalised by the same act, which further prohibits actions against a trade union, its members or officials, in respect of any alleged wrong committed by or on behalf of the trade union.

By the Trade Union Act, 1913, c. 30, a combination may be a trade union although it has objects or powers other than statutory objects, which are defined by the Trade Union Act Amendment Act, 1876, c. 22. (CONSPIRACY; COMMON LAW, DOCTRINE OF; TRADE UNIONS.)

[*Laws of England*; nom. Crime, vol. 9.]

J. E. C. M.; W. A. B.

COMFORT, STANDARD OF. This expression, together with the synonymous "standard of living," has been generally employed by economists in connection with the question of POPULATION (*q.v.*) Among the "preventive remedies" of over-population described by MALTHUS (*q.v.*) in his essay is included "moral restraint," and this is defined (ch. ii.) as a "restraint from marriage from prudential motives." By this is meant the fear of losing, as the consequence of entering upon the responsibilities of the married state, the command of adequate means of subsistence. The means, which will be regarded as adequate, will vary according to the conception formed by the individual, or the class to which he or she belongs, of the elements which make up subsistence; and it is this conception which is implied in the term "standard of comfort," or "standard of living." It may, therefore, vary from age to age, from country to country, from class to class, and even from individual to individual. The term may be analysed in different ways. We may regard the constituent elements of subsistence as consisting of (1) food, (2) clothes, (3) shelter, etc.; or we may, using a cross-division, consider with SENIOR (*Political Economy*, p. 36) that the range of man's desires rises in an ascending scale from (1) necessaries to (2) decencies and (3) luxuries. And hence the term has sometimes been employed in a narrower, and sometimes in a wider sense. In an earlier and less advanced stage of civilisation the proportion assigned to the element of necessaries in the conception formed by classes and by individuals of their standard of comfort is greater than it is at a later stage, and among these necessaries the supply of food is accorded the most prominent place. And therefore the question of population has very generally been considered either solely or chiefly with reference to food, and it has also been argued by M^cCULLOCH and others that the habitual use of a cheap staple article of food by a nation may lead to inconvenience and danger, because in the event of a scarcity or famine of that food, there would be no cheaper food on which to fall back, and the standard of comfort would not permit of temporary contraction. It has been said that "you may take from an Englishman, but you cannot take from an Irishman." If a famine of wheat should occur, the Englishman could fall back on some cheaper food; but experience has shown more than once that the Irishman has nothing on which to fall back if the potato fails. But General WALKER has pointed out (*Wages Question*, ch. vii.) that, so far as regards the temporary contraction of the standard of comfort, this argument does not appear to take sufficient account of the fact that there are other constituent elements of the standard besides food, and that therefore the habitual use of a cheap food may allow of greater expenditure in other directions, which may be curtailed, should food become scarce, and its price advance. A similar failure to realise the elastic comprehensiveness of the term "standard of comfort" has been shown (cp. SIDGWICK, *Principles of Political Economy*, bk. i. ch. vi. § 3) to attach to another line of reasoning in which it has been introduced. Modern socialist writers (see SOCIALISM), such as RODBERTUS and LASSALLE, have spoken of an "iron and cruel law" of wages, which is always forcing wages down to the level of a bare subsistence. For, if they rise above this level, there is a tendency to an increase of population, and the greater competition for employment, which is consequent upon this, tends in its turn to occasion a decline of wages. This law is undoubtedly based on the conception of a standard of living or comfort, which will be maintained in such a way that, if the earnings of man and woman rise above the amount sufficient to secure this standard, population will increase, and, if they fall below, it will decrease. But the conception is often, though it is not always, interpreted by socialist writers in a narrow sense as referring to the bare necessaries of life, and not more widely as

including its decencies and luxuries. It is used as if the standard of comfort were limited to physical needs, and did not comprehend moral requirements. As a matter of fact it consists of the necessaries, decencies, and luxuries of life; and the desire to retain command over the possession of the two last may become more powerful even than the want of the first as a restraint on the increase of population. The nature of all three may undergo considerable change and exhibit great variety. The house, which would now be a decency in England, would have been thought a luxury two or three centuries ago. The clothes, which would be deemed extravagant to-day, except in theatrical performances, would then have been considered necessary articles of apparel. The tobacco, which is regarded as a decency in Turkey, is still perhaps a luxury in England, and the wine, which is a decency in England, is a prohibited luxury in Turkey. And so the standard of comfort varies in different ages, countries, and classes; and in the case of the lower as of the higher ranks of society it may advance from time to time. The origin of the socialist law of wages has been ascribed to RICARDO's (*q.v.*) theory of the natural price of labour, but Ricardo's own language is sufficiently elastic and comprehensive. "It is not to be understood," he says (ch. v.) "that the natural price of labour, estimated even in food and necessaries, is absolutely fixed and constant. It varies at different times in the same country, and very materially differs in different countries. It essentially depends on the habits and customs of the people." And again he remarks, "The friends of humanity cannot but wish that in all countries the labouring classes should have a taste for comforts and enjoyments, and that they should be stimulated by all legal means in their exertions to procure them." The effects of the standard of comfort on the movement of population are of course not immediate; and the consequences of an alteration in it take some time to make their influence felt. And hence J. S. Mill has argued (bk. ii. ch. xiii. § 4) that, "when the object is to raise the permanent condition of a people, small means do not merely produce small effects, they produce no effect at all. Unless comfort can be made as habitual to a whole generation as indigence is now, nothing is accomplished." In a similar way General Walker has shown (*Wages Question*, ch. iv.) that, if through some sudden mischance wages sustain a serious fall, a positive "degradation" of labour may follow, and the labourer may have no power or strength to maintain his old standard of comfort without external assistance.

It should be noted that some ambiguity may arise regarding the unit selected for consideration in connection with the standard of comfort. The term may sometimes refer to a single individual, whether male or female, and sometimes to a family as a whole. In the discussion of questions of population the conditions, which are necessary in order to maintain the requisite supply of labour, are generally present to the mind of the writer; and then the standard of comfort must be understood as referring to the family as the unit rather than the individual, for the wages of the labourers must be such as to enable them to live themselves, and to maintain their wives, and bring up their children, according to the standard of comfort, which they consider necessary for a family in their rank of life. But the earnings possibly of the wife, and possibly also of the children, may be called in to assist those of the man, and so from the point of view both of income and expenditure the family is treated as the unit. There are however, other cases in which shorter periods of time are in view than those sufficient to allow of the standard of comfort producing its full influence on the movement of population, and then the term is often employed with reference to the individual rather than the family. An example of this may be found in the comparison made between the earnings of men and of women (cp. FEMALES AND CHILDREN, EARNINGS OF; see also DAVIES, D.)

In addition to the books mentioned above, some typical budgets of working men, showing the chief items of their expenditure, and the proportionate amounts spent on the different items, have been compiled abroad, especially by Dr. Engel and M. Le Play, and more recently in our own country by the Board of Trade. [See FAMILY BUDGET, WORKMEN'S BUDGETS.] L. L. P.

COMMANDITE, SOCIÉTÉ EN. Form of joint stock company, *Code de Commerce*, liv. i. tit. iii. §§ 23-28. The managing partners are liable without limit; the investing partners are regarded as simple lenders to the undertaking, and their liability is limited to their investment. Something equivalent (joint-stock company limited, the liability of whose directors is unlimited) is legalised by the Companies Act 1867, §§ 4-8; and it would appear desirable in the interests of careful management that investors should encourage the adoption of this form of joint-stock company. A. D.

COMMERCE. Trade in its most extended form. "Commerce" and "trade" are words which are used almost synonymously. But commerce may be regarded as national, that is as covering commercial dealings between nations; and trade refers more distinctly to special industries and to internal mercantile intercourse. It will therefore be proper, keeping to the limits thus set down, to furnish under the head of commerce a summary of the external commercial relations of Great Britain and Ireland, of her colonies, and finally of the world. The figures, as we shall see, are not only interesting

in themselves, but will serve to illustrate some economic truths as an appeal to actual fact alone is able to do. It is marvellous how the commerce of the world may almost be said to be the creation of the past hundred years. The close of the twenty-five years of war that followed the French Revolution found the external commerce of the world mainly confined to luxuries, wines and spirits, tobacco, tea, and so on—the rigidly protective policy of the leading nations of the earth, added to their hostility, keeping down the national interchanges to high-priced goods only.

In 1820, five years after the overthrow of the first Napoleon, the imports and exports combined (they were then "official values," not "declared values" as we have them now) (OFFICIAL; DECLARED AND REAL VALUES) of the United Kingdom were only £79,500,000, or only about £3 : 15s. per head of the population then existing, whereas in 1912 they reached £1,344,000,000, or £29 : 3 : 8 per head. During the same period the commercial intercourse between Great Britain and her colonies has been almost wholly created, and amongst foreign countries the movement is upon the average very considerable. Steam carriage, the freedom from protracted wars, the growth of population, colonisation, and electricity have been the main elements in that development of commerce. In 1854 the "official values" were discarded in the imports for *computed* values and in the exports for *declared* values, and from 1871 the values of the imports have also been *declared*. The following figures give the imports and exports at intervals since 1855 :—

Year.	Imports.	Exports.		
	United Kingdom.	United Kingdom Produce.	Foreign, etc., Produce.	Total Exports.
1855	*£143,542,850*	£95,688,085	£21,003,215	£116,691,300
1860	*210,530,873*	135,891,227	28,630,124	164,521,351
1870	*303,257,493*	199,586,822	44,493,755	244,134,738
1880	*411,229,565*	223,060,446	63,354,020	286,414,466
1885	*370,967,955*	213,044,500	58,359,194	271,403,694
1887	*362,227,664*	221,414,186	59,348,975	280,763,161
1890	*420,885,695*	263,531,585	64,349,091	327,880,676
1908	*592,953,487*	377,103,824	79,623,697	456,727,521
1912	*744,640,631*	487,223,439	111,737,691	598,961,130

The highest cash value of the imports was in 1912, when they reached £744,641,000, and the highest value of the exports was also in 1912, when the total was £598,961,000. The increase indicated up to 1872 has since in a measure fallen off, and it was not till 1899 that great progress was again recorded. Since that date the progress has continued. But it is well worthy of remark that these are values only, and in no wise show the volume of merchandise moved. Now there have latterly been compiled many statistics to show that the prices of commodities have largely fallen since 1872, when measured by a gold standard; and the tabular statistics supplied by Sir R. H. Inglis Palgrave to the Royal Commission on the Depression in Trade in 1886 are conclusive on this point. It was therein shown that, as compared with 1865-69, prices in 1885 fell, on average, 20 per cent, and as compared with 1872 the drop was 30 per cent. From this drop no important recovery has occurred up to quite recently (1912). Hence it appears that this country's Foreign commerce is in bulk about 30 per cent larger than in 1872. Indirectly the shipping tonnage entered and cleared with cargoes only at the ports of the United Kingdom is an illustration of this expansion.

Ports of United Kingdom.	Entered.	Cleared.
	Tons.	Tons.
In 1872.....	17,905,940	19,248,352
In 1912.....	76,191,000	76,266,000

Thus it is right to assume that notwithstanding that values are, as already stated, not as high as might have been expected owing to depreciation in prices, the actual commercial intercourse of the United Kingdom has largely increased.

In 1912, 36 per cent of the imports consisted of food and drink, 35 per cent of raw materials and articles mainly unmanufactured (of which 49 per cent was for textile manufacture), 24 per cent of manufactured goods, 2 per cent of metals and minerals, 1⅞ per cent of chemicals and dyeing materials, leaving 1⅛ per cent to be classed as miscellaneous goods, including tobacco. In the same year, of the United Kingdom exports, as much as 38 per cent consisted of textiles, including yarns, 21 per cent of metals and machinery, 8 per cent of coal, 3 per cent of apparel, 6 per cent of food and drink, 4 per cent of chemicals, etc., 1 per cent of earthenware, china and glass, ¾ per cent of paper, over 1 per cent of leather, nearly 1 per cent of arms and ammunition, etc., nearly 2 per cent of ships, and 2 per cent of railway carriages, motor cars, carts, etc., leaving 12 per cent of miscellaneous exports. These are the returns for 1912, excluding precious metals. In the same year the imports of gold reached £52,688,881, and the exports £46,538,469, while the imports of silver were £16,778,304, and the exports £18,333,019. Combined with the former, the following contrast is presented :—

United Kingdom, 1912.	Imports.	Exports.
Merchandise.....	£744,640,000	£598,961,000
Precious metals	69,467,000	64,871,000
	£814,107,000	£663,832,000
Excess of imports	..	150,275,000
		£814,107,000

This excess of imports is a very striking feature, and it continues. In 1900 the excess was over £176,000,000; in 1890, over £101,000,000; in

1880, £121,000,000 ; in 1870, £69,000,000. How can this constant influx, averaging over £130,000,000 annually since 1880, be accounted for? The figures furnished officially are admittedly defective on some points. The imports of precious stones are to a large extent wanting ; exports of ships are included in 1899 and subsequently, but not before. It is probable that if we added £10,000,000 on each side for missing items, we should be within the mark. But this does not help us to an answer to the question, How is the discrepancy between our imports and exports to be accounted for? In the first place, these imports are valued *plus* the charges for shipment to our ports, while the exports are returned *minus* those charges. Let us take 9 per cent as this addition to the exports (the reason of this rate will appear later) as representing the earnings of British shipping engaged in this commerce ; and add another 4 per cent for the earnings of British shipping carrying goods wholly for foreign countries or our colonies, and a total of some £72,000,000 results, which may fairly be set towards filling up this discrepancy. There still remains much to be accounted for. The interest remitted home for investments abroad supplies in great measure the solution. An estimate in the *Bankers' Magazine* of 1880 of the amount of interest accruing annually upon British investments abroad, reached a total of £70,000,000 sterling. The income from abroad has since increased ; some foreign holdings may be smaller but colonial are certainly larger, and the estimate for 1911-12 in the Report of the Inland Revenue is over £103,894,000. The following rough balance-sheet may, therefore, be made respecting the commercial relations of the United Kingdom in 1912 :—

LIABILITIES.

Imports (as stated)	£814,000,000
,, (not stated)	10,000,000
Difference may, between the foregoing amount and that stated *per contra*, possibly be an increase in foreign investments	40,000,000
	£864,000,000

ASSETS.

Exports (as stated)	£664,000,000
,, (not stated)	10,000,000
Earnings of British shipping	86,000,000
Interest on foreign investments	104,000,000
	£864,000,000

This is to be understood only as a rough approximation ; it shows, however, that but for a further investment of capital abroad the country would have had the call of a still larger volume of imports.

The commerce of the British Empire may thus be stated, the figures including the precious metals, which in some colonies may to a large extent be ranked as merchandise,

	Imports. 1912.	Exports. 1912.
United Kingdom	£814,364,000	£664,143,000
Asiatic Possessions	209,636,000	235,183,000
Australasian ,,	88,075,000	100,267,000
African ,,	59,088,000	77,659,000
N. American ,,	117,723,000	67,277,000
S. American ,,	2,900,000	3,639,000
W. Indian ,,	11,211,000	9,952,000
European ,,	2,616,000	988,000
	£1,305,613,000	£1,159,108,000

If to this total be added the return of the remaining countries of the world, we obtain the following grand total :—

	Imports.	Exports.
British Empire	£1,305,613,000	£1,159,108,000
Europe	1,952,082,000	1,599,659,000
Russia and Turkey	208,851,000	150,292,000
Asia	195,916,000	177,501,000
America	535,336,000	681,525,000
Africa	112,428,000	112,371,000
World's Commerce	£4,310,266,000	£3,980,456,000

These figures are the latest returns available, though not all for the same year, and it will be seen that the exports grew to the extent of £329,810,000 in value by the time they became imports. This difference was equal to over 8 per cent on the exports, or to nearly 4 per cent on the combined total of imports and exports. In this way we arrive at some notion of the earnings and profitableness of commerce, and the worth and value of the world's shipping industry. Thus the world invariably appears to import more than it exports, and it is far from indicating any loss of purchasing power that there should be this discrepancy between imports and exports. Taking the population concerned as 1,623,000,000, this trade represents imports per head to the extent of £2 : 13 : 1, and exports to the extent of £2 : 9s. per annum. These averages, however, are reduced by the vast populations of Asiatic countries like China, where the imports are not quite 3s. per head and the exports but little over 2s. In Europe (apart from Russia and Turkey and the British Isles) the imports average nearly £8 per head, and the exports about £6 ; in America (North and South, excluding Canada) imports are nearly £4, and exports nearly £5 per head.

The exports from Australia to Great Britain average some £8 per head of the population of the Colony ; from New Zealand, over £14 per head ; from the South African Union, over £8 per head ; from Canada, over £4 per head.

[The theory of excess of imports is well stated by Sir R. Giffen in *Essays on Finance*. There is a full enumeration of the exports other than commodities, "invisible exports," by which imports are balanced in Bastable's *International Trade* ; the heads of British commerce are given by Sir Rawson Rawson. His statement of the growth of tonnage and the conclusions built on it are striking (see also Goschen, *Foreign Exchanges*). For further details

see the Statistical Abstract and the Parliamentary Papers relating to trade and commerce, *passim.*]

COMMERCE, BRITISH (HISTORY OF). The earliest trade of the British Isles consisted in the exchange of tin with the Gauls, and perhaps also with Phœnician traders.

Under Roman rule the agricultural and mineral resources of Britain were more fully developed. Corn was exported in large quantities. Tin, copper, lead, and iron were extracted, but there is little evidence that these articles were exported. London, as a centre of commerce, dates at least from Roman times (Tac. *Ann.* xiv. 33). It was certainly the principal port for trading with Gaul.

The English conquest which swept away the remains of the system established by Roman administrators, broke off active commercial relations with the continent; even the materials for any notice of commerce during the early Anglo-Saxon period are wanting. Towards the end of the 8th century traces of a revival appear—due to the influence of the Christian Church. The letter of protection for English pilgrims given to Offa of Mercia by Charlemagne (796), which refers to trade carried on by them, has even been called "the first English commercial treaty." There is no evidence as to the commodities exported, but it may be inferred that raw wool had now become a leading article of trade to the Netherlands. Commerce was mainly in the hands of foreigners. The settlement of German merchants, which afterwards became the London HANSE (see ADVENTURERS, MERCHANT), existed *temp.* Ethelred II. (979-1016), and some aliens were probably resident before that reign. The often-quoted law of Athelstane (925-40), that a merchant who had made three sea-voyages should be of right a thane, is a proof of the small number as well as of the importance of such native traders. There is evidence that Bristol was the seat of a considerable trade in slaves with the Danish settlements in Ireland. The constant intercourse between England and Normandy also restored in some degree the older trade with northern France.

The "Colloquies" of Ælfric (11th century) tell us what the commodities imported were. A merchant being asked what he brings, replies, "skins, silks, costly gems and gold, various garments, pigments, wine, oil, ivory, orichalcum (brass), copper, tin, silver, glass, and such like," hence it appears that articles of luxury were the principal imports. During the whole Old English period commerce was little developed (see CITY, MEDIÆVAL). The so-called Anglo-Saxon "laws" bear the impress of this state of things. Beyond a few trite rules no commercial policy is discernible. The customs of a town regulate trade in it. There is no general commercial law. Any settled and definite policy as "mercantilism" or "protection" is not to be expected. At most, the rules bearing on the subject reflect the economic prejudices current among the classes who had the framing of law and usage in their hands.

The commercial position of England in the 12th century is better known. The communication with Normandy increased by the Conquest (1066). In the middle of the century mention is made of the import of silver in exchange for meat, fish, cattle, and wool, all being sent to the manufacturing districts of the low countries. The vigorous rule of Henry II. (1154-1189) assisted the revival of trade. His possession of Guienne gave new opportunities for traffic in import of wine and salt thence. Rouen was particularly favoured, being granted a monopoly of trade with Ireland, and freedom of commerce in London. The foundations of the future prosperity of many English towns were now laid. London was the seat of trade in such Eastern luxuries as were then becoming known through the influence of the Crusades (see CRUSADES, ECONOMIC EFFECTS OF). Bristol and Chester had whatever Irish trade existed, and both these towns imported French wines. Hull was one of the ports whence wool went abroad, and the trade with Norway was carried on through Grimsby. Exeter exported the tin of Cornwall obtaining wine and salt in return. A further proof of the growth of the English towns is found in the establishment, in most of them, of Merchant Guilds (see GILDS). Corn was sometimes exported, but not without a royal licence (as in 1181, see CORN LAWS). A particular import—woad used for dyeing—seems to show that a native woollen manufacture existed, though all finer cloth came from Flanders.

The development of commerce from the reign of Henry III. (1216) can be traced by the attempts at legislation scattered through the early parts of the statute-book. The increased number of foreign merchants in England is a good indication of larger trade relations. The provisions of the great Charter, securing them liberty in time of peace and reciprocity of treatment in war, must have been called forth by the importance of their interests. Many cases of special privileges occur; as those granted to Venetian merchants and to German cities; first, to Cologne, the principal town of western Germany, later to Lübeck, chief city of the eastern Hanse. French cities (*e.g.* Amiens, 1237) also obtained special favours, mainly consisting in relaxation of restraints on trade imposed by customs and ordinances of English towns. All legislation was not so generous in character. The export of wool and import of cloth were prohibited 1261; "prohibitions repeated 1271." In 1275 foreigners were ordered to sell their goods and depart within forty days, probably to hinder FORESTALLERS (*q.v.*) Much indeed of mediæval legislation was in the

interest of the consumer rather than, as in later times, of the producer.

Besides the general effect on commerce produced by the policy and constitutional legislation of Edward I., he dealt in some cases directly with matters affecting trade. The Statute of Merchants (1283) gave greater security to foreign as well as native traders for recovery of debts, while the *Charta Mercatoria* (1303),—which by its enumeration of the various nationalities affected shows the extent of the body of foreign traders, confirmed and extended privileges which aliens had gradually obtained. Full security was given to all foreigners to come and go free from any personal duty; they were allowed to sell by wholesale to any native or alien, and to retail spices and mercery; any article might be exported, on paying the duty (except wine, for which a licence was required), to countries at peace with England. All restrictions on residence were removed, the export of wool on which duty had once been paid was legalised. It might also be moved from one part of the country to another (see BOARD OF TRADE). In this period there is a close connection between politics and commerce. Edward I. used the English supply of superior kinds of wool as a means of securing aid from the Flemings. According to the requirements of the moment its export was either forbidden, heavily taxed, or freely permitted. The first prohibition of the export of gold is found 1307; soon afterwards the STAPLE (*q.v.*) comes into notice. We cannot trace here the various changes of the system, but it tended directly to limit trade to the staple towns, and by enabling the course of every transaction to be more easily watched, made it possible to enforce the statutes which forbade foreigners to take their money out of the kingdom, or, in a milder form, required one half of it to be expended on native commodities.

The exports during the 13th and 14th centuries included wool, sent largely to Flanders, hides, tin, and fish. Coal was exported to France from Newcastle in the 14th century. Lead and iron were also at times exported, and in good seasons corn. The imports comprised iron from Spain, linen and fine cloth from Flanders, wine and salt from Gascony, silks, fruits, spices, and Greek wines brought by the Italian fleets, which, after 1317, regularly visited England. Furs, pitch, and timber came from the north of Europe through the traders of the Hanse towns; in times of scarcity corn was imported. The trade with Bordeaux was very active, and mainly carried on by English ships from London, Bristol, Dover, and Hull; they took out wool, herrings, lead, copper, and tin, and pilgrims as passengers; they returned laden with wine and wheat. In 1350, 141 ships carried 13,429 tuns of wine from Bordeaux to England.

The difficulty of getting precise amounts of the commodities traded in during the earlier periods has led historians to quote gladly the exports and imports as given in the custom accounts for 1354. The former comprise 31,651½ sacks and 3036 cwt. of wool, sheepskins, hides, 4774½ pieces of coarse cloth, and 8061½ pieces of worsted, representing a total value of £212,338 : 5s., of which nearly £82,000 went in duties. The imports were 1831 pieces of fine cloth, 397¾ cwt. of wax, 1829½ tuns of wine, with linen, mercery, and grocery, the whole valued at £38,383 : 16 : 10, paying nearly £600 duty. These figures, however, though instructive as showing the amounts of commerce in certain articles, and illustrating the great predominance of export duties in early times, are yet very incomplete, *e.g.* there is no account of the large export of minerals. More detailed returns of the customs of the port of London during the 14th century show extraordinary fluctuations from year to year.

The mechanism of commercial transactions became much more refined during the period under consideration. Though the earliest dealers in money and exchange, the Jews, were expelled by Edward I. (1290), their place was speedily taken by Italians, who supplied the funds needed by the English kings for their French wars, and developed the employment of the BILL OF EXCHANGE (*q.v.*) Even in the absence of direct evidence it is probable that the stringent regulations as to export of money were evaded by the use of these instruments, supplemented by smuggling, which the small size of all the vessels employed in trade rendered very easy.

The trade of Ireland and Scotland, up to the end of the 14th century, was not important. Bristol received the raw produce of Ireland, principally corn and skins; there was also some direct trade with Bordeaux. Scottish wool was exported from Berwick, and the produce of the fisheries found its way both to England and the Continent.

At the opening of the 15th century British trade, in its mediæval form, had attained a high development, and was increasing in volume. Italian merchants were accorded full privileges by Henry IV. (1409), and even allowed to engage in the carrying trade contrary to the policy of the early Navigation Laws *e.g.* that of Richard II. (1381). The remarkable poem called a *Libel of English Policy* (1436) gives a full account of commodities exchanged between the countries of western Europe. Spanish goods—fruit, oil, soap, wax, and iron—reached England by way of Bruges. The Portuguese trade, a direct one, supplied similar wares with the addition of hides and salt. Of Italian traders the Genoese brought alum, spices, and gold to meet the balance due by them for the export of wool and

cloth from England. The Venetians supplied articles of luxury and were regarded with disfavour as leading the nation to engage in "unproductive" consumption. Wine and salt came from France, as formerly, but, in consequence of the continual wars, through Brittany, then practically independent. Trade with Flanders consisted in the exchange of raw materials for manufactures, but the growth of a feeling in favour of native industry is shown by the writer, who advocates a decided national policy, holding that England by her power over the supply of raw wool, and by her possession of Calais, which gave her command of the Channel, could compel Spain and the Netherlands to support her against France.

One of the best indications of the growth of commerce is the increasing number of wealthy native merchants. Though some are mentioned in the 13th century, and the names of De la Pole and Whittington were remarkable in the 14th, it is not till the 15th century that they become numerous,—at London, Cotton, Smith, and Bullayn; at Hull Taverner is noticed as trading with Italy and enjoying special freedom by royal licence; Thornton at Newcastle; the Jays, Sturmy, and notably the Cannynges at Bristol. William Cannynge the younger is said to have had one ship of 900 tons, and to have employed 800 men and ten ships with an aggregate tonnage of 2853 tons.

In the 15th century the society of ADVENTURERS, MERCHANT (*q.v.*) was first chartered (1406), though a greater antiquity is claimed for it. This body, trading with the Netherlands, Germany, and the Baltic coast, interfered with the previous monopoly of the Teutonic Hanse, which, however, still retained its privileges and factory at London. The fact that the Hanse trade supplied much needed and desired commodities—timber for ships and bows, iron, flax, and hemp, besides furs and Rhenish wine—undoubtedly led to this favour.

Another noteworthy feature is the increased number of COMMERCIAL TREATIES (*q.v.*) stipulating for reciprocal concessions to subjects of the contracting parties. Engagements of this kind were formed with Venice, the Hanse towns, Brittany, Castile, the Netherlands, and Denmark, the most remarkable being those of Utrecht with the Hanse in 1474, and the *Intercursus Magnus* (1496) which reopened the Netherlands trade after a suspension of two years.

The prejudice against foreign traders became very strong during the latter part of this century, and was still more intense in the next. English commerce had reached a turning-point; instead of simply supplying other countries with raw materials and taking in exchange finished articles, it was sought to preserve the home market for native produce and to place the carrying trade, so far as English imports and exports were concerned, in the hands of English merchants. The woollen manufacture, which had always existed in a rude form and had been improved by Flemish immigrants in the 12th and 14th centuries, was now in a position to export the coarser kinds of cloth. The commercial history of the time is powerfully affected by a movement towards what would now be called "protection." Not to mention many minor acts dealing with special cases, there is the well-known statute of 1463 (3 Ed. IV. c. iv.) prohibiting, by enumeration, the import of almost all wrought goods, "that the English artificers may have employment"; and though the statute was limited to the king's reign, it was in fact re-enacted in that of Richard III., and regarded so late as the 18th century as "the wisest piece of commercial legislation." The ideas of aiding the defence of the kingdom, as in the laws of 1408 and 1483, requiring the import of bowstaves by the Venetian traders, and of securing an abundance of commodities specially needed for the welfare of the people, were still prominent in the minds of statesmen.

These tendencies of English commercial policy were supported by changes in the outside world. The fall of the Greek empire (1453) and the later conquest of Egypt (1517), involving the decline of Italian commerce, altered the balance of commercial as of political power. The consolidation of the French and Spanish monarchies changed the older lines of English trade with those countries, and the opening up of the New World of America and India had a still greater effect. The trade with the Mediterranean, formerly in the hands of the Italians, was now so important as to lead to the appointment of a consul at Pisa, 1485 (confirmed 1490), and after the discovery of the Cape passage to India (1497), English trade with Portugal rapidly increased. The Guinea traffic was opened 1530, the North Sea voyage to Russia discovered 1553. The Levant commerce commenced 1550, the first LEVANT or TURKEY COMPANY (*q.v.*) was chartered 1581. Ten years later the first voyage to India was made, and 1600 the foundation of the EAST INDIA COMPANIES (*q.v.*) was laid.

The movement of English commerce is shown by the average amounts of imports and exports during the reign of Henry VIII., which fairly represent the first half of the 16th century; as estimated by Schanz, they are as follows:—Imports, 10,060 tuns of wine; 3028 cwt. wax, making with other imports a total real value of £402,092, but officially estimated at £284,360. Exports, 98,132 pieces of cloth; 5785 sacks of wool; 14,056 hides; 4387 pieces of worsted; 8931 cwt. of tin, with other exports giving a total estimated value of £427,830, officially stated at £293,287. Comparing these figures with the returns for 1354 given above, the growth of the woollen industry is evident—in-

stead of unwrought wool it is cloth that is exported. Even in Flemish markets English competition was beginning to be felt during the 15th century, while the wider field that the Italian and Levant trade offered proved a further encouragement. The development of English export trade was aided by the monetary revolution of the 16th century. For a thousand years there had been no considerable addition to the amount of money in circulation, which at times had been even reduced. England had kept up its stock of money by trade with Flanders and the Italian cities, but the discovery of the mines of Mexico and Peru led to a continuous flow of bullion through Spain to the commercial centres of the Low Countries, where the rapid rise in prices stimulated the already-growing import of English products, since there was no rise of prices in England till 1570. The revolt of the Netherlands gave a further opportunity to English traders. The capture of Antwerp (1585) was a severe blow to its trade, most of which passed to Amsterdam and London, which during the preceding eighty years had been gradually gaining at the expense of other English ports. A large body of Flemish weavers emigrated to the eastern counties and increased the power of that district to produce for export. The closing of the London settlement of the Hanse (decreed 1552, finally carried out 1598), removing as it did the last trace of a time when the commerce of England was conducted by foreigners, is a significant mark of the opening of a new period.

The 17th century is pre-eminently the period of the MERCANTILE SYSTEM (*q.v.*) The tendencies which had been shown under the Tudors, and even earlier, to advance native industries by excluding foreign rivalry, now took the direction of encouraging exports, more especially of imitating the commercial development of Holland by securing markets and the CARRYING TRADE (*q.v.*) The commerce of this period was mainly carried on by companies, either joint stock or regulated, possessing in some cases monopolies of commerce with particular countries—the East India Companies of eastern traffic, the Merchant Adventurers of the German trade. There was a steady advance in business transacted, as the following short table proves.

Year.	Imports.	Exports.	Total.
1613	£2,141,151	£2,487,435	*£4,628,586*
1622	2,619,315	2,320,436	*4,939,751*
1662	4,016,019	2,022,812	*6,038,831*
1669	4,196,139	2,063,274	*6,259,413*
1699	5,640,506	6,788,166	*12,428,672*
1703	4,526,579	6,644,103	*11,170,682*

Making due allowance for errors in the returns for each year, taken as they are from different sources, the general fact of increasing commercial relations is plain. In addition to older lines of traffic, all still open, there was the East India trade at the commencement of the century, and later the important trade to the American "Plantations." At first the energy and superior resources of the Dutch enabled them to secure the greater part of the additional commerce of Europe. The pamphlet writers of the period are agreed on the point, and they are probably correct. Notwithstanding this relative inferiority, the commerce of England was certainly prospering. The woollen industry, now established as the leading manufacture, was increasing its export. Indian trade replaced the older commerce with Italy in supplying Eastern products, but the trade with the Mediterranean, now carried on by the Levant Company, retained much of its importance. Sugar, tobacco, and such rude products as timber and hides, were imported from the American colonies in large quantities. In spite of national jealousy and wars, the direct trade with Holland was large; English goods being stored at Amsterdam to be reshipped in the cheaper Dutch vessels. The Navigation Laws (see NAVIGATION ACTS), sought to destroy the advantage of these rivals, and are generally held to have so far succeeded. A further instance of the same spirit is found in the complete prohibition of French goods (1678); and, though the measure expired at the death of Charles II., it was practically re-enacted after the Revolution. In other respects the policy of protection was developed, the export duty on wool replaced by a prohibition, and various foreign products, which might compete with English goods were either excluded or heavily taxed. Trade with Ireland and the colonies was subjected to restrictions with the double object of securing a market for home manufactures and a cheap supply of raw materials for native workers. In another direction, however, commerce was freed from restraint. The privileges of the companies were closely questioned and the monopoly of the Merchant Adventurers was removed. The old "Statutes of Employment," prescribing the expenditure of money within the country, became obsolete, and the export of bullion was legalised (1663), a reform in which the advocates of the East India Company took a prominent part, since this trade was carried on by the export of silver to the East, where it was specially prized.

By the end of the century the exports to Holland had probably reached their highest point. In 1703 they amounted to £2,417,890 (*i.e.* over 36 per cent of the total), more than half (£1,339,526) being woollen goods. Trade with France was only possible by means of smuggling; the Methuen treaty with Portugal (1703) being expressly designed to give the wines of that country an advantage over competitors, of which the chief was France. The attempt to negotiate an Anglo-French commercial treaty (1714) was a failure, and the privileges given to England by the treaty of

Utrecht (1713) caused a development of the South Sea trade, ending in the terrible crisis of 1720-21. During the first half of the 18th century the most noteworthy feature of commerce was the growth of colonial trade. In 1704 the combined imports and exports in the "colony" trade were less than £1,300,000, or about one-ninth of the whole. Between 1760 and 1770 the colonial trade was one-third of a traffic which had doubled in amount; in the export trade the increased proportion was still greater.

Among new articles of export may be noticed hardware from Birmingham and Sheffield, and cotton; the latter, though steadily growing, only amounted in value to about £200,000 in 1764, while the export of woollen goods was about £4,000,000.

The period 1750-70 fitly covers the commencement of the economic movement which has been happily called the INDUSTRIAL REVOLUTION (*q.v.*) A series of inventions altered the whole method of production, and the improvement in transport made exchange easier. As a consequence foreign trade, in spite of the political hindrances arising from protracted war, increased at a greater speed. The official values of imports and exports are not too inaccurate to bring this out clearly.

Imports and Exports at intervals of ten years 1770-1810.

Year.	Imports.	Exports.	Total.
1770	£11,002,000	£12,142,000	*£23,144,000*
1780	9,956,000	11,363,000	*21,319,000*
1790	16,398,000	17,636,000	*34,034,000*
1800	28,258,000	34,382,000	*62,640,000*
1810	39,302,000	48,439,000	*87,741,000*

The cotton industry shows the largest increase. In 1790 the value exported was £1,662,369; 1800 it reached £5,406,501; 1810, £18,951,994. The woollen export advanced from about £6,000,000 in 1800 to over £9,000,000 in 1815. There was also an increase in exports of hardware, earthenware, and silks.

During this remarkable development there was no relaxation of the Protective System. An exception must, however, be made for the early administration of the second Pitt (1784-92), when the customs laws were consolidated and the Eden treaty negotiated with France (see COMMERCIAL TREATIES). The break-down of the colonial system by the establishment of the independence of the United States did not reduce the American demand for English goods. On the contrary the exports thither increased from about £2,000,000 in 1772 to £3,500,000 in 1793 and £7,000,000 in 1798.

The peace of 1815 may be regarded as closing the period of English commerce which opened with the 17th century; since then the modern system of foreign trade has arisen (see COMMERCE).

The great commercial development of England has naturally led to the formation of theories as to the causes which have produced it. The principal are: (1) The mercantile theory, predominant in the writers of the 17th and first half of the 18th centuries, which explains the growth of English commerce by reference to the wise regulations and restrictions imposed by the state. (2) The view of Adam Smith and the English economists which ascribes the supremacy of England to its *comparative* freedom from restraints. (3) The doctrine of List who regards the present greatness of English industry and commerce as largely due to the advantages given by the earlier system of regulation and restraint. The influence of this theory may be traced in most recent works on economic history.

[Anderson, *Historical and Chronological Deduction of the Origin of Commerce*, 2 vols. fol., London, 1764.—Macpherson, *Annals of Commerce*, 4 vols. 4to, London, 1805. Based on Anderson for the period 1492-1760; the earlier part and the conclusion to 1800 by Macpherson solely.—G. L. Craik, *The History of British Commerce*, 3 vols. 12mo, London, 1844. Compiled from preceding.—W. S. Lindsay, *History of Merchant Shipping and Ancient Commerce*, 4 vols. 8vo, London, 1874-76. Notices of Commerce in vols. i. and ii.—W. Cunningham, *Growth of English Industry and Commerce*, 2d ed. 8vo, vol. i., Cambridge, 1890.—For the mediæval period, W. Von Ochenkowski, *Englands Wirthschaftliche Entwickelung im Ausgange des Mittelalters*, pp. 168-253, 8vo, Jena, 1879, and W. J. Ashley, *English Economic History and Theory*, vol. i. pp. 102 *seq.* are useful.—G. Schanz, *Englische Handelspolitik*, 2 vols. 8vo, Leipzig, 1881, is a thorough study of the later mediæval period of English commerce and specially of the earlier Tudors.—J. E. T. Rogers, *History of Agriculture and Prices*, 6 vols. 8vo, Oxford, 1866-88, devotes special chapters to foreign trade (vol. i. ch. viii., vol. iv. ch. iv., vol. v. ch. v.)—Leone Levi, *History of British Commerce*, 1763-1878, 2d ed. 1880, has collected evidence on the growth of commerce in the 18th century.—Hubert Hall, *A History of the Custom Revenue of England*, 2 vols. 8vo, 1885, illustrates the course and methods of the mediæval trade of England.—H. de B. Gibbins, *History of Commerce in Europe*, cr. 8vo, London, 1891, bk. ii. ch. vii., bk. iii. chs. iii. and vi., and *Industrial History of England*, cr. 8vo, London, 1890, period iv. ch. ii., gives a good brief account of the growth of foreign trade. For legislation, charters, and diplomatic documents, the sources are: *The Statutes of the Realm*, 9 vols. folio, London, 1810-22, and Rymer, *Foedera*, 17 vols. fol. London, 1704-1717.

Among the innumerable pamphlets on the different aspects of English commerce, the following give a view of its state at different times.—Sir W. Raleigh, *Observations touching Trade and Commerce with the Hollanders*, Works, vol. ii. London, 1751.—J. R., *The Trade's Increase*, 1615.—L. Roberts, *The Merchant's Map of Commerce*, 1638.—Sir J. Child, *A New Discourse of Trade*, 2d ed. 1690.—Davenant, *Discourses on the Revenues*

and the Trade of England, part ii. Works, vol. i. ed. 1771.—De Foe, *A Plan of the English Commerce*, 1728.] C. F. B.

COMMERCIAL INSTRUMENT. An instrument embodying a contract the benefit of which passes to every owner of the instrument. Where such an instrument is by custom transferable by delivery, with or without indorsement, and is also capable of being sued upon by the person holding it for the time being, there it is entitled to the name of a negotiable instrument and the property in it passes to a *bonâ fide* transferee for value, notwithstanding any defect in the title of the transferor. Bills of exchange, cheques, and promissory notes, are generally negotiable, but if they are payable to order an endorsement is required as well as delivery, if they are payable to bearer mere delivery is sufficient. A *bonâ fide* owner for value can claim payment of such an instrument if the chain of indorsements is complete, though one of the indorsers was not entitled to negotiate. A forged indorsement interrupts the chain, and a banker paying a bill having a forged indorsement cannot, as a general rule, debit the acceptor or the drawer with the amount of the bill. It is, however, provided, by way of exception to the rule just stated, that, where a cheque, payable to order, has been paid in good faith and in the ordinary course of business, the banker is deemed to have paid it in due course, notwithstanding any forgery in the indorsement (Bill of Exchange Act, § 60). A bill of exchange, promissory note, or cheque is not negotiable if it contains words indicating an intention that it should not be transferable (*Ibid.* § 8, sub-§ 1), and it ceases to be negotiable if its further negotiation is prohibited by a restrictive indorsement (*Ibid.* §§ 37 and 36). Over-due bills are not negotiable (*Ibid.* § 36, sub-§ 2). If a *cheque* is crossed with the words "not negotiable" it ceases to be a negotiable instrument, but it remains transferable. A person taking such a cheque, though payable to bearer, cannot claim payment if any of the holders through whose hands it has passed took it without a sufficient title.

A debenture, though expressed to be payable to bearer, is not necessarily a negotiable instrument (Crouch *v.* Crédit Foncier, Law Reports, 8 Queen's Bench, 374), but bonds or debentures may be made negotiable by statute—for instance, a statute of George III. made East India Bonds negotiable like promissory notes—and as promissory notes can now be issued under seal, debentures must be considered negotiable if they have otherwise the characteristics of promissory notes.

Foreign government bonds payable to bearer are generally considered negotiable by the law of the country in which they are issued, and are treated as such by the custom of bankers, brokers, and dealers; if this is the case negotiability is also recognised in English courts (Gorgier *v.* Mieville, 3 Barnewall, and Cresswell 45; Goodwin *v.* Robarts, 1 Appeal Cases, 476). The same may be said with regard to share-certificates issued to bearer and other similar securities, but where share-certificates are not issued to bearer they will, as a general rule, not be negotiable; thus American railway shares are generally transferred by an indorsement appointing the indorsee attorney to effect the transfer in the company's books. It has become the custom for registered shareholders of such shares who wish to sell them to indorse the same in blank, and, according to the custom of the London stock exchange, shares thus indorsed in blank pass from hand to hand, until a buyer wishes to become registered as owner of the shares. Shares indorsed in blank in this manner are not negotiable, and a *bonâ fide* purchaser for value taking them from a thief acquires no title (Williams *v.* Colonial Bank, Law Reports, 38 Chancery Division, 388, affirmed by House of Lords 15 Appeal Cases, 267).

Documents of title relating to goods such as bills of lading and dock warrants are commercial instruments, without being negotiable in the strict sense; if a document of this nature is stolen, a *bonâ fide* holder for value taking from the thief acquires no right to the goods; he is, however, protected against vendor's lien and stoppage *in transitu*. The Factors' Act, 1889, provides that if a mercantile agent is, with the consent of the owner, in possession of documents of title to goods, any sale or pledge of the goods made by him is valid, unless the person taking under the sale or pledge had notice that it was unauthorised; in the absence of evidence to the contrary the consent is to be presumed. No such simple rule exists in the case of negotiable instruments. Bankers frequently make advances to customers on the security of such instruments, knowing that they may not be the borrower's property, but assuming that he has authority to pledge them. Where a money dealer obtained such an advance, the House of Lords held that the banker ought to have made special inquiries as to the extent of the authority (Earl Sheffield *v.* London Joint Stock Bank, Law Reports, 13 Appeal Cases, 333), but a similar decision of the Court of Appeal in the case of a stockbroker (Law Reports [91] 1 Chancery, 270) was overruled by the House of Lords (*Times* newspaper, 5th April 1892). The question depends on the particular facts of each case. E. S.

COMMERCIAL LAW. The body of legal rules that fall under the phrase "commercial law" may be divided into four classes. (1) International rules that govern the commercial intercourse of states. A very considerable portion of international law is concerned with

commerce, *e.g.* the rights of aliens, the position of consuls, freedom of navigation, carriage of contraband of war, breaking blockades, and the seizure of private property by belligerents. (2) Municipal laws of a political nature affecting the commerce of a state, such as laws imposing restraints on or encouraging foreign trade, laws relating to conveniences for navigation, laws regulating carriage by sea or land, laws encouraging particular trades, and laws preventing monopolies. (3) Municipal laws relating to the private interests of trade such as the law of contracts generally, and of special mercantile contracts in particular, including the law relating to the instruments of commerce. (4) The remedies to be pursued for injuries to commercial rights.

No attempt has as yet been made by the state in England to separate commercial law from the general body of the law, and only one text writer has endeavoured to do so on any adequate scale (see *Treatise on the Laws of Commerce and Manufactures and the Contracts relating thereto*, by J. Chitty, London, 1820). Several continental states, on the other hand, (*e.g.* France), have also a special commercial code administered usually by special commercial tribunals.[1]

[The sources of commercial law may be classified as follows :—

a. Roman law, which furnished to the early English judges many rules which they applied to personal property.

b. The maritime codes of the commercial communities of Europe. The most important of these codes were the Consolato del Mare, the Ordinance of Wisby, the laws of Oleron, and the Ordinance of Louis XIV. See Pardessus, *Collections des lois maritimes antérieures au xviii^e. siècle*, Paris, 1828-1845.—Warnkönig, *Flandrische Staats- und Recht-geschichte*, vol. 1.—*Capitula et ordinationes maritimæ civitatis Amalfitanæ*, Vienna, 1844.

c. The customs of merchants which came to be enforced if implied in contracts between merchants.

d. Statutory enactments. The great charter protected foreign traders ; bankruptcy laws were passed under Elizabeth ; monopolies were prohibited and the law relating thereto was settled in the time of James I.

e. The decisions of the courts. To Lord Chief Justices Holt and Mansfield, and to Lord Stowell is mainly due the development of the principles of commercial law.

Treatises relating to early commercial law : *Consuetudo vel Lex Mercatoria*, by Gerard Malynes, London, 1622.—*Lex Mercatoria*, by G. Jacobs, London, 1718.—*Lex Mercatoria Rediviva*, by W. Beawes, London, 1751.

Modern treatises : Smith's *Mercantile Law*, London, 1890.—O. Tudor, *Leading Cases on Mercantile and Maritime Law*, London, 1884.]

J. E. C. M.

COMMERCIAL ROUTES, History of.

A. *Ancient History.*—Ancient commerce is remarkable for concentration ; it affected a comparatively small portion of the earth's surface. The earliest peoples who rose to prominence and prosperity, the Chinese, the Egyptians, and the Aryan inhabitants of India, were mainly occupied in agriculture and domestic manufactures. None of them possessed the enterprising spirit which leads to external trade. The Chinese especially displayed that aversion to intercourse with foreigners which has characterised them to the present day. What trade existed in early days was conducted overland. The Arabs with their camels are the earliest known merchants. Their caravans conveyed the most valued commodities between Egypt and the populous districts of Central Asia and Hindostan.

The Phœnicians, the advanced outpost of the Semitic race on the Mediterranean, whose forests gave a plentiful supply of timber for the construction of ships, made the first attempt to conduct commercial enterprise by sea. Under the successive headships of Sidon and Tyre, the Phœnicians undertook the trade between east and west. Their colonies, originally commercial factories for the collection of goods, gradually spread over all the coasts of the Mediterranean, while Cyprus, Malta, and Sardinia furnished them with convenient harbours in the middle of that sea. For more than four centuries they monopolised the maritime commerce of the world. They collected and exchanged gold and precious stones from Asia, corn and linen from Egypt, frankincense and other spices from Arabia, wines from Italy and Greece, and the slaves of Africa. Gradually bolder traders overstepped the limits of the Mediterranean. Instead of merely receiving eastern goods from Arab caravans, they crossed the isthmus of Suez and voyaged from the Red Sea to the Persian Gulf and the coast of India. Westward they passed the Pillars of Hercules and founded a colony at Cadiz, whence they journeyed round the African coast as far as the Canaries, and sought the highly-valued tin from the Tin-Islands, identified by some with the Scilly Isles.

Few geographical discoveries of first-rate importance were made in ancient times after the Phœnicians. Their most notable rivals were the Greeks ; first Miletus and the Ionian cities of Asia Minor, and, after the Persian conquest, Athens and Corinth. But the Greeks did little more than compete with the Phœnicians on the old routes. Their colonies extended from the Ægean to Italy, Sicily, and the coasts of Africa and Gaul. Their greatest traveller, Pytheas, perhaps penetrated further westward than Phœnician merchants had been before. The

1 The commercial code in France has been considered to have exercised a great influence on traders by compelling attention to the mode in which they are conducting their business. Recent modifications may endanger this. See Code Napoléon.

most notable achievements of Greek commerce were the opening up of the Black Sea trade and the improved intercourse with Central Asia and India, which followed the conquests of Alexander. The Greeks succeeded, however, in distancing their older rivals; the political annihilation of Tyre left the maintenance of Phœnician reputation and interests to its greatest colony, Carthage. But the Carthaginians, though they checked the advance of Greek colonisation, and almost monopolised the trade with Spain, were unable to recover the eastern trade of the mother city. Their maritime ascendency was almost wholly confined to the western part of the Mediterranean.

Carthage and Greece succumbed in turn to Rome. But the Romans never were a mercantile people. Their original occupations were agriculture and war, and they learned no new ones. Trade they always left to foreigners, as in their decline they entrusted the defence of the empire to the barbarians. Roman colonies, in contrast to those of the Greeks and Phœnicians, were military strongholds. The extension of the Roman empire increased geographical knowledge, and facilitated commercial intercourse. The growing population and wealth of the capital made the supply of its wants a lucrative and necessary business. But Rome lived on the spoils of the provinces. It could never be a great mart; it had hardly any products of its own to exchange for the imports which it received. The chief commercial cities in the Roman period were Palmyra, Ephesus, Alexandria, in the east, Marseilles and Cadiz in the west. Maritime enterprise was checked rather than encouraged in the Roman period. It was no longer necessary to pass the straits of Gibraltar when intercourse with Britain could be conducted through Gaul and across the Channel. The Romans were great makers of roads, and overland trade became more usual and important than in the days of Phœnician and Greek ascendency. The gradual disruption of the empire by German invaders proved a direct blow to commerce, the extent and security of which had been seriously diminished by the 5th century A.D.

B. *The Middle Ages.*—The fall of Rome led to a separation between east and west unknown in earlier times. Western Europe was occupied for centuries with almost incessant wars. The invasion of the Germans was followed by the advance of the Slavs, who spread over the whole of northern Germany, and of the Huns, whose attack was still more destructive, though ultimately less successful. The Germans, who succeeded in keeping the upper hand in the west, were not a town-loving people. Like the early Romans, they devoted themselves to arms and agriculture. The social system they developed in contact with Roman influences was FEUDALISM (*q.v.*), by which the occupants of the soil were bound to render military or agricultural services. Nations were non-existent; international trade unknown. Maritime enterprise partook of the prevalent military character. The sailors of the early Middle Ages were the hardy Northmen, whose aims were plunder and conquest, not a peaceful exchange of commodities. The temporary union of western Christendom under Charles the Great promised to revive commercial intercourse, but his empire broke up under his sons. Trade relapsed again into insignificance.

Meanwhile the East had a separate life of its own. Roman law and traditions were preserved at Constantinople, which for a time took the place of Rome as the great receptacle of imported commodities. Greek merchants brought thither the products of Asia and Africa from Syria and Egypt, and those of eastern Europe from the shores of the Black Sea. But the trade of Constantinople suffered from the short-sighted regulations of an arbitrary government, and was soon seriously curtailed by Arab conquests. Under the mighty impulse given by the teaching of Mohammed, the Arabs reduced in rapid succession the interior of Asia, the northern shores of Africa, and distant Spain. Everywhere they carried with them their Koran and their trade. The Arabs, the earliest, became in the early Middle Ages the greatest merchants in the then world. The chief centres of their trade were Mecca, Bagdad, Damascus, and Alexandria. There they collected and exchanged the products of China, of India, and of northern Africa. Arab ships traversed the Red Sea and the Persian Gulf, where their most notable ports were Yemen, Aden, and Basra. But maritime enterprise had been prohibited by Omar; it was never regarded with favour by the caliphs. The chief routes of Arab commerce were overland; their caravans journeyed through Central Asia and the north of Africa. At Trebizond they collected the products of the Black Sea and eastern Europe, and thus diverted much of the trade which would otherwise have gone to Constantinople. Spain alone of the Arab conquests was compelled, from its position, to use the sea as a means of transit. For some time Spanish Arabs and Moors monopolised the trade of the western Mediterranean. Their most important harbours were Cadiz, Malaga, and Almeria.

The *Crusades* (v. CRUSADES, *Economic effect of*) —the most important event in mediæval history —had the effect of reuniting the east and west, which had been severed since the irruption of the Germans, and of reviving the supreme maritime importance of the Mediterranean. Constantinople declined; the great Italian republics, —Venice, Pisa, and Genoa,—founded factories in Greece, on the coasts of Syria, and the Black Sea. There they collected oriental products brought by Arab caravans, and thence conveyed them to western Europe. From Italy the chief

commercial routes ran overland to southern Germany. From Venice the most frequented road proceeded by Verona and across the Brenner to Ulm, Augsburg, and Ratisbon. From Genoa and Pisa merchants travelled to Lake Como and across the St. Gothard to Lucerne and Strasburg. All the goods not retained by the south German towns passed on to Bruges, the great emporium of the Middle Ages, where the products of the north were exchanged for those of the south and east. The only serious competitors of the Italian towns for the Levant trade were the bold sailors of Catalonia, but their market was limited to the Spanish kingdoms and the south of France.

The chief carriers of goods in Europe at this date were the Germans. While trade between Italy and Flanders founded the prosperity and political importance of the great towns of southern Germany, their fellow-countrymen in the north found another means of acquiring wealth. The famous HANSEATIC LEAGUE (*q.v.*), formed 13th century, undertook the task of conducting commerce between the east and west of northern Europe. Their leading towns, Lübeck and Hamburg, commanded the land route connecting the Baltic with the North Sea. The task of defending their trade against the aggressions of the Scandinavian peoples, who could block the maritime entrances to the Baltic, forced on the north German towns a unity and an organisation to which the less threatened cities of the south never attained. The chief depots of the Hanse towns were at Novgorod, Wisby, Bergen, London, and Bruges. At Bruges they met the southern merchants, and received from them the products of their native industry and those which they brought from Italy. The nations who in later times won maritime supremacy had not yet turned their attention to mercantile adventure. England was mainly an agricultural country; its chief product, wool, was exported to be made up by Flemish looms. The people of Holland and the adjacent provinces procured a scanty subsistence by fishing and cultivating the soil. France, not yet emerged from the condition of feudalism, found its energies absorbed in internal struggles and the great war with England. Its oldest port, Marseilles, had lost the importance it had once possessed, and did not recover any notable share in the Mediterranean trade till the 15th century.

C. *Modern History.*—It is no arbitrary choice which has fixed on the fall of Constantinople as the dividing line between mediæval and modern times. The Turkish conquests threatened to bring about the same result as had been achieved by the German migrations of the 5th century—to break off once more the connection between Asia and western Europe. One after another the Italian factories in Greece and Asia Minor were taken and destroyed. The closing of the Levant was not completed until the conquest of Egypt by Selim I. in 1519, but, for seventy years before, eastern trade had gradually been becoming more difficult and precarious. The great problem created by these conditions was the discovery of another route to the east. It is true that the chief instrument of maritime discovery, the compass, had been invented some time before, and the Portuguese had already commenced their famous voyages along the western coast of Africa. They had discovered Madeira 1419, they found the first of the Azores 1432, they reached the Cape Verde islands 1456. Bartholomew Diaz commanded, 1487, an exploring expedition, which, after being driven out to sea in southern latitudes, touched a point on the south coast of Africa. Diaz then followed the coast till, observing in it a persistent north-easterly trend, he felt justified in sailing home to announce that Africa had been rounded. About ten years later, 1497-98, Vasco da Gama made the first voyage by this route to India. For nearly a century the Portuguese had almost a monopoly of the trade between India and Europe. The great Albuquerque, though he failed to take Aden and so to secure the command of the Red Sea route to the Mediterranean, made himself master of Ormuz, at the mouth of the Persian Gulf, and thus closed the second of the two ancient routes to the shores of that sea. He also gave a capital to the Portuguese settlements by the capture, 1510, of Goa, in whose fine harbour the Portuguese vessels could remain secure between the monsoons. Not long after his death, 1515, the trade of Portugal extended even to China.

Meanwhile, the Spaniards had also attempted to solve the great problem of the age. Christopher Columbus, a Genoese by birth, had conceived the scheme of reaching India by sailing westwards. Under the patronage of Isabella of Castile he set out on his great expedition of 1492, which resulted in the discovery of America. Ignorant of the existence of this intervening continent, his contemporaries, believing he had really reached India, gave the islands where he first landed the name of the West Indies, which they have kept ever since. Columbus himself believed that the islands connected with Asia "stretched out so far to the eastward that their distance from Europe could not be great." The exact position of America was not appreciated until 1513, when Balboa crossed the Isthmus of Darien and discovered the Pacific, of which he took formal possession in the name of the Spanish crown.

There is no need to speak of the further progress of discovery, of the conquest of Mexico and Peru, of the famous papal bull which divided the world between Spain and Portugal, and which enabled the latter to claim possession of Brazil (BULL OF BORGIA, *q.v.*) It is sufficient

to point out here that these discoveries revolutionised the commercial routes of the world. The Mediterranean lost its importance, the Italian cities were ruined. Trade lost its old unity and concentration, and fell into the hands of new peoples. The Portuguese and Spaniards preserved the ascendency which their precedence in the work of discovery assured them. The great routes of commerce ran to the west and to the east. But the central point to which trade converged was still the Netherlands. Antwerp, at that time a possession of the Spanish king, took the place which Bruges had lost owing to the silting up of its canal and the increased size of vessels necessary for oceanic trade. The overland routes in southern Germany ceased to be employed for anything beyond local exchange. The Baltic was no longer a great commercial highway, and the Hanse Towns steadily declined until their league perished in the turmoil of the Thirty Years' War (see HANSEATIC LEAGUE).

But the later part of the 16th century witnessed another great mercantile revolution. Antwerp was ruined by the reckless oppression of Alva and the long war which followed the revolt of the Netherlands. Two countries, England and Holland, hitherto unknown in the history of commerce, began to pose as the maritime rivals of Spain and Portugal. The trade which Antwerp lost was gradually diverted to London and Amsterdam. Philip II. annexed, 1580, Portugal and its dependencies to the Spanish crown. The defeat of the Spanish Armada, 1588, annihilated the maritime ascendency of Spain. These events led to the collapse of the monopoly of the eastern trade so long preserved by Lisbon. The Dutch were the first to seize the opportunity thus offered. Dutch vessels reached ports of the East Indies 1595; within a few years Dutch settlements were formed in Java and Sumatra. The great Dutch East India Company was formed 1602; it founded a capital for its vast possessions at Batavia 1618. England was not slow to follow in the footsteps of the Dutch, and in 1600 the first of the English EAST INDIA COMPANIES (*q.v.*), received its charter. Though the massacre of Amboyna excluded them from the spice trade, the English succeeded in establishing a lucrative commerce with Hindostan. From this time the eastern trade was open to every European country; France, Sweden, Denmark, endeavoured to obtain a share in it. But these countries each entrusted the trade to an exclusive company, and thus checked the progress which private enterprise might have effected.

Meanwhile the decline of Spain led to a similar extension of western commerce. John Cabot had discovered, 1496, Newfoundland for Henry VII.; Jacques Cartier sailed, 1534, up the St. Lawrence and gave the name of New France to what is now the province of Quebec. But it was not till the 17th century that the Spanish ascendency in America was seriously threatened. Quebec was founded, 1603, as the capital of the great French colony of Canada; by the end of the century the French had also established themselves in Louisiana at the mouth of the Mississippi. Between Canada and the Spanish settlement in Florida the whole of the western coast was successively occupied by the English, who absorbed the Dutch province of the New Netherlands, and the Swedish colony on the Delaware. At the same time France, England, and Spain shared the West Indian islands among them, and their incessant rivalry proved the cause of numerous wars. The Dutch for a time took Brazil from the Portuguese, but they abandoned it, 1661, and from this time confined their attention mainly to the eastern trade, their control over which was strengthened by the establishment of a colony at the Cape of Good Hope. The loss of their position in America was fatal to the commercial greatness of the Dutch. The eastern trade, trammelled by the system of exclusive companies, made comparatively little progress, while the commerce with America, where the European settlements were real colonies instead of mere mercantile depots, became every year more important and lucrative. In America, too, unlike the East Indies, trade was open to any subject of the colonising countries.

It is impossible and unnecessary to trace here the history of European colonies in the 18th century. Its main characteristic is the steady growth of the colonial power of England at the expense of France and Spain. In the history of commercial routes it is only important to remember that each country set itself to monopolise the trade with its own colonies. It was the age of the MERCANTILE SYSTEM (*q.v.*), and colonies were regarded as one of the chief means by which a country could secure for itself a favourable balance of trade. Thus the intercolonial trade was of small proportions, and was of the character of a smuggling trade, carried on in defiance of restrictive laws. The attempt to enforce these laws, which regarded colonies as existing merely for the benefit of the mother-country, led, quite as much as the stamp act or the tea duty, to the revolt of the American colonies.

From the 15th to the 18th centuries, therefore, an enormous extension of European commerce was effected by the opening up of the Atlantic and Pacific. The old routes of the Middle Ages were abandoned, the Italian and German cities lost their mercantile importance, trade followed a vast number of complicated routes across the ocean. But of this trade the Atlantic coasts of Europe were still the centre, and as long as the system of monopoly was upheld, this condition of things would be maintained. But in the later part of the 18th

century a fatal blow was dealt to the old colonial system by the American revolt and the French Revolution. From this time it became impossible to treat colonies merely as markets for the goods of the mother country. Former restrictions were disregarded or abolished, a new era of colonial independence and self-government set in, completed when England, raised through the results of the revolutionary wars to being beyond all question the greatest of colonial powers, adopted a policy of free trade. From this time the trade of the world has lost even the semblance of unity which was preserved as long as the routes from the colonies led of necessity to the mother country in Europe.

Great commercial changes have taken place within the last century which must be briefly alluded to. First, the rapid and almost unparalleled development of Australia and New Zealand. In the 18th century Australia was only known as a convict settlement, whereas Sydney and Melbourne are now among the greatest ports of the world. Second, the opening of the Suez Canal, effected primarily by French enterprise and capital, but of which the chief benefit has hitherto been reaped by England. It is not too much to say that the Suez Canal has revolutionised the commercial routes to the east. It has restored much of their old importance to the Mediterranean and the Red Sea. It has effected at least a partial revival of the commercial prosperity of Italy and Egypt. The overland route to Brindisi has taken the place of the old roads through southern Germany to Venice and Genoa. The return of eastern trade to its mediæval direction has been one of the most notable events of 19th century history. Its political consequences have been still more far-reaching. Third, the development of the great trans-continental railways of Canada, the United States of America, and Siberia, and the improved railway communication of the Near East. Lastly, the opening of the Panama Canal, the results of which belong to the domain rather of the future than of history.

[Adolf Beer, *Allgemeine Geschichte des Welthandels* (Vienna, 1860, 2 vols.)—Movers, *Das phönizische Alterthum*, Bd. iii. (Berlin, 1856).—Grote, *History of Greece*.—Mommsen, *Römische Geschichte*.—Sartorius, *Geschichte des hanseatischen Bundes*.—Ritter, *Geschichte der Erdkunde und der Entdeckungen* (Berlin, 1861).—Peschel, *Geschichte des Zeitalters der Entdeckungen* (1858).—Macpherson, *Annals of Commerce* (4 vols., London, 1805).—E. J. Payne, *History of European Colonies* (London, 1877).] B. L. ; G. G. C.

COMMERCIAL SCIENCE (*Handelswissenschaft*). Strictly speaking the term commercial science should be applied to that branch of political economy which treats of the increase of wealth and the economy of labour by the operations of commerce, it being assumed that the state does not interfere, and that every individual is instigated by economic motives, and by economic motives alone. In this way a distinction may be clearly drawn between *Staatswissenschaft* and *Handelswissenschaft*. But in practice this subject of commerce has been treated much more from the view of an *art* than of a *science* (*e.g.* cp. *Traité théorique et pratique des opérations commerciales et financières*, by N. Merten ; *Handelswissenschaft*, by C. F. Findeisen. In the former of these two works the theoretical treatment is really confined to that part of the subject concerned with banking and exchange operations, while the latter is practical in nearly every sense). Viewed in this way commerce is treated with reference to the facts of business, and thus affords a continued series of illustrations of many points in ordinary economic theory. Thus exchange is viewed with a special regard to the various classes of middlemen and the services rendered by each to the rapid circulation of the commodities. Again, instead of speaking of a producer or a seller without explanation, an attempt is made to classify producers or sellers in their various actual forms, whether as individual operators, as partners in a firm, or as members of a company. The function of each is described. As there is considerable approximation to the character of a handbook of commerce, a certain attention is of necessity paid to the legal standing and obligations of the various parties involved. The intensely practical nature of this treatment is, however, relieved when we come to questions of money and exchange, for here the theoretical principles are clearly and definitely laid down. This latter branch of the subject it is which has attracted most attention of recent years both on the Continent and in England, as we may see from the labours of such writers, for instance, as Jevons (*Investigations in Currency and Finance*), Giffen, Goschen, R. H. Inglis Palgrave, Ellis, Bagehot, J. G. Courcelle-Seneuil, and others.

E. C. K. G.

COMMERCIAL SYSTEM. The fourth book of the *Wealth of Nations* is devoted to an examination of "systems of political economy," considered, as Adam Smith explains, as a branch of the science of a statesman or legislator. With his accustomed sense of the due proportion of theory to historical facts, the writer devotes almost the whole of the book to an examination of the commercial or mercantile system which had reached its full maturity as part of the policy of Europe, whilst the agricultural system of his friend Quesnay is dismissed in a single chapter on the ground that it "at present exists only in the speculations of a few men of great learning and ingenuity in France." Any account of the commercial system by a modern writer must be in the main a repetition of Adam Smith with indications of the principal criticisms to which his work has been subjected. The chief fault to be found with Adam Smith's treatment, as a whole, is that he was so much

concerned to destroy the system as part of the practical policy of the day and as altogether unfitted for the stage of industrial development already attained, that he sometimes overlooks and sometimes mistakes the conditions under which the system arose, and under which it answered the wants of the time. Subsequent writers (in Germany, *e.g.* List, Schanz, Roscher, and in this country W. Cunningham) have shown that the mercantilists at any rate as represented by their chief writers, were not guilty of the childish sophism that money only was wealth and that the only thing at which the commercial legislator should aim was the acquisition by the country of the greatest possible sum of money by its foreign trades. In many respects they regarded a favourable balance of trade merely as a good symptom of other more important national interests, such as the full employment of labour and capital at home, a point on which Adam Smith himself lays much stress in his second book. In other aspects of their system, the political power of the nation was considered as fundamental, as in the navigation laws, of which again, including the motives at their basis, Adam Smith strongly approves (compare Seeley's *Expansion of England*). At the same time, however, it must be admitted that before the last quarter of the 18th century the system had ripened to decay, the ideas which had given it vitality at an earlier stage had been lost sight of, and the mere symptom, *i.e.* the favourable balance, had come to be considered as itself the essence of well-being.

The following is a brief critical summary of Adam Smith's treatment as given in book iv. of the *Wealth of Nations*. He begins by an explanation of the true functions of money in trade, and its relation to other forms of wealth, and shows that no particular political attention should be directed towards the accumulation of money, either on account of its durability or because it is thought to be useful in foreign wars. The argument is decisive against the case as it is represented; but it may be objected that if we substitute for durability the idea of a store of value, and if we remember that at the end of the 17th century Pope's father, on retiring from business, carried his wealth in actual guineas, and recall the graphic account of Pepys hiding his money, we may arrive at a juster view of this mercantilist point. And the further we go back towards the mediæval period, this peculiar importance of money as a store of value becomes more prominent. Again, as regards the foreign wars, there was a close connection between the balance of trade and the balance of power, and even in our own day we find Bismarck and other foreign statesmen attaching importance to a full supply of gold in their "war chests." The ostensible object of the mercantilists being to obtain a favourable balance (see BALANCE OF TRADE, HISTORY OF) we have next to consider the methods by which this end was promoted. Speaking generally, the aim of their policy was to diminish as much as possible the importation of foreign goods for home consumption and to increase as much as possible the exportation of the produce of domestic industry. The restraints on importation were of two kinds: (1) restraints on any foreign goods which could be produced at home from whatever country they were imported; and (2) special restraints on imports from countries with which the balance of trade was generally unfavourable. As regards (1) Adam Smith gives the most general arguments in favour of free trade as against prohibition (see FREE TRADE). The principal point to observe is that Adam Smith was not in a position to state the free trade theory with the dogmatic simplicity of some modern writers, as he was obliged to take into account the opinions expressed in book ii., on the comparative advantages of employing capital in different ways, *e.g.* the superiority of home to foreign trade and of agriculture to manufactures, especially as regards the labour of a country. If from this point of view his case is not so strongly put as at present, on the other hand logically we must take into account his optimistic views on nature and his references to the "invisible hand," which directs private interest so as to increase the public good. The dangers of prophecy are incidentally illustrated in the assertion that even the free importation of foreign corn could very little affect the interest of the farmers of Great Britain, and the free importation of cattle or meat still less. The chapter is also noteworthy for the famous exceptions to free trade, admitted by Adam Smith as generally advantageous or at least worthy of deliberation, and in which the older and more rational mercantilists would recognise much of their own teaching. Thus on the ground that defence is of much more importance than opulence, "the act of navigation" is described as "perhaps the wisest of all the commercial regulations of England." The taxation of foreign commodities which come into competition with those which are produced and taxed at home is approved, though the possible extension of the doctrine to substitutes, and to the general as distinct from the special taxes of the foreigner, so far as it is taken account of, is repudiated. The cases worthy of deliberation are retaliation with the view of obtaining better terms for our exports and the regard for vested interests on the ground of humanity. (2) The restraints upon imports from countries with which we have an unfavourable balance are much more strongly condemned. It was easy to show that even on mercantilist principles, that is, taking the favourable balance as fundamental, the rest of the world should be considered simply as one

great market, and that we should buy in the cheapest and sell in the dearest country, independently of the particular balance. Simple, however, as this doctrine seems, it is still often lost sight of, and forgetful of the indirect settlement of international debts, so-called fair trade writers compare the exports and imports between two particular countries, *e.g.* France and England. Adam Smith at this stage shows clearly that it is for the interest of a nation to have rich neighbours, and that anything which injures a foreign nation indirectly injures the home country. He points out also that the "favourable balance of the annual produce and the consumption" is very different from the balance of trade and "necessarily occasions the prosperity or decay of every nation," to which the mercantilists might rejoin that the one balance properly understood, *i.e.* as referring to a growing export trade compared with consumption of foreign luxuries, is one of the best signs of the other balance.

Passing now to encouragements given to exports, we notice first of all (1) *drawbacks*. These, as the name suggests, are duties drawn back on exportation or re-exportation, and as they tend to restore the natural course of trade, they are strongly approved of by Adam Smith. The chief dangers of drawbacks are that the commodity may be re-imported and the revenue suffer from smuggling, and that, as abundant proof has been given lately, the drawback may really be a bounty in disguise (see DRAWBACKS; BOUNTIES). (2) *Bounties* are next examined, and receive the strongest condemnation of any expedient of the mercantile system (see BOUNTIES). Incidentally the whole subject of the Corn Laws is examined and it will be seen from the different species of laws discussed that the commercial system as a whole was much more varied in its aims than is generally supposed. The laws, for example, against engrossing and forestalling were plainly drawn up in the interests of the consumer, and the same object was apparent in the attempt to abolish the middlemen and, to quote a favourite position of Adam Smith, to bring the produce as near as possible to the consumer. (3) The next expedient of the system to encourage exports was the negotiation of treaties of commerce giving special advantages to those countries with which we had or were supposed to have a favourable balance. Again it may be said that Adam Smith takes a rather narrow view of the real objects of many of these treaties. The reader may compare List's account, in *National Systems of Political Economy*, of the celebrated Methuen treaty with Portugal. In recent times much controversy has taken place on the advantages and disadvantages of commercial treaties; they were approved of by Cobden, and have been adopted to a large extent practically even by this country, but they are objected to by extreme free traders (see COMMERCIAL TREATIES). (4) The last device of the system to encourage exportation was the monopoly, total or partial, of the colonial trade. This question is discussed by Adam Smith at great length, as was only natural, since his work appeared in the same year as the declaration of American independence. The argument, however, of the chapter is involved and rather obscure. The principal difficulty is caused by the constant reference to the writer's peculiar views on the relative advantages of employing capital in different ways—such as that the near trade is more advantageous than the distant. It is noteworthy also that one of the cardinal objections of Adam Smith to this monopoly is that thereby the general rate of profits in the country is *raised*, and that this element in the cost of production being increased, we are undersold in other commodities, thus sacrificing an absolute for a relative advantage. If a country is so wealthy that it is naturally exporting capital, this argument falls to the ground. Another objection to Adam Smith's line of treatment is that perhaps he does not pay sufficient attention to the idea of political power historically involved in the acquisition or colonisation of new territory. Although the East India Company was never a commercial success, it laid the foundation of our Indian empire. At the same time, however, he was the first to propose a wide-reaching scheme of what would now be called imperial federation.

There remain to be noticed two other expedients of the mercantile system. As regards raw materials and the instruments of manufactures, the usual policy, described above, was apparently reversed and importation was encouraged and exportation discouraged or prohibited. The explanation is to be found in the idea that if raw material were worked up before being exported it would be more valuable, and that a nation should keep for its own benefit any peculiar advantages of production. The history of the woollen trade is most instructive on this point. Wool in the early Middle Ages was the principal export and source of England's supply of money, whilst later on the export was forbidden and the prohibition was extended to sheep. As regards "instruments" of production, the living instrument—the artisan, was placed under the same restrictions as dead capital. The idea that the exportation of raw material and instruments shall be discouraged has recently been revived in this country as regards our coal supplies, and one of the favourite modern protectionist arguments is that for the higher forms of work a nation should rely on its own members and not let them become mere "hewers of wood and drawers of water."

[The principal interest of the mercantile system is historical, though many of its expedients are still advocated under the name of fair trade. Besides

the works alluded to, the reader may consult the books mentioned under the particular articles referred to, *e.g.* FREE TRADE, BOUNTIES, etc.]

J. S. N.

COMMERCIAL TREATIES. Treaties of commerce seem to have been of very early origin. Sir H. Maine (*Village Communities* p. 192) has pointed out the close connection in the most rudimentary societies between neutrality and markets; and in times when the same word (*e.g. hostis*) was often used both for enemy and stranger, it is plain that commerce was hardly possible without some more or less formal agreement. The earliest commercial treaty extant was that made between Rome and Carthage, B.C. 508 (cp. Macpherson's *Annals of Commerce*, vol. i. p. 60). [iii. 22, 23 Polybius.] The earliest treaty that occurs in the history of England is that between Charlemagne and Offa, A.D. 796. Throughout the mediæval period the foreigner was regarded as a highly suspicious character. In Saxon times foreign traders were only allowed to come to the country on the occasion of four great fairs, and were obliged to leave the kingdom within forty days. Attempts were made to keep in force this forty-days regulation down to the time of the Tudors (cp. Schanz, *op. cit. inf.* vol. i. p. 380). For a considerable period aliens were liable for the debts contracted by members of the same town or country, and even for crimes the same mutual obligation prevailed. One of the clauses of Magna Charta (§ 41) refers to the protection given to foreign merchants. More than a hundred years later (1325) it was stipulated by Edward II. that the merchants of Venice should have power to come to England for ten years with liberty to sell their merchandise and to return home in safety "without having either their persons or goods stopped on account of other people's crimes or debts." It may be said generally that the principal object of commercial treaties for many centuries was simply to afford security to traders. In process of time, however, as the mercantile system (see BALANCE OF TRADE; COMMERCIAL SYSTEM) was developed and this rudimentary security had been attained, commercial treaties became the great agents by which a nation tried to secure for itself the advantages supposed to follow from this system. Treaties of this kind were severely attacked by Adam Smith (*Wealth of Nations*, bk. iv. ch. vi.), who takes as his principal example the famous Methuen Treaty concluded with Portugal in 1703. The reader, however, should compare with Adam Smith's remarks the account of the benefits conferred by this treaty upon English traders as stated by List (*National System of Political Economy*, p. 62, Eng. trans.) The root idea of modern commercial treaties is reciprocity. A list of the treaties of commerce and navigation still in force between the United Kingdom and foreign countries is to be found in Leone Levi's *History of British Commerce*, 2d ed. p. 565. The treaty which has excited most controversy is that negotiated with France by Richard Cobden in 1860 (cp. *Finance and Politics*, by Lord Buxton, vol. i. ch. xi.; and Lord Morley's *Life of Cobden*, vol. ii. ch. xi.) In the negotiations of the treaty the emperor of the French, by whom alone the matter on the French side was practically settled, was influenced largely by purely political considerations. It was, however, in this treaty that the notion of the reciprocal advantages rather than the balance of losses by mutual concessions first found due prominence. The principal provisions were as follows: On the side of France prohibitive duties were to give way to protective duties of moderate amount. On all the staples and material articles of British manufacture—woollen, cotton, silk, flax, jute, hemp, hair, and manufactures of iron and other metals, tools and machinery, manufactures of leather, wood, glass and earthenware, as well as on yarns, coal and coke, and other raw materials, etc.—the duties were to be so much reduced that the maximum *ad valorem* charge was not to exceed 30 per cent, which was to be reduced within three years to 25 per cent, and the duties, when practicable, were to be changed into specific duties. Thirty per cent was to be the maximum, but the actual amount of duty to be paid on each article was left to separate negotiation, and in the result in most cases it was fixed much below the maximum. According to Cobden the average did not actually exceed 15 per cent. (Buxton, *Finance and Politics*, vol. i. p. 230.) England, on her part, engaged to abolish at once all the remaining import duties on manufactured goods. She agreed not to levy a duty on, or prohibit the export of, coal; and—the most important practical concession to France—she agreed to make great reductions on wine and brandy; other nations, however, being of course placed on the same footing. Both parties engaged to insert in the treaty a "most favoured nation clause." The treaty was to remain in force for ten years and then to continue from year to year unless "denounced" by either party, in which case, unless definitely renewed, it would lapse in twelve months. In 1872 the treaty was "denounced" by France at the instance of Thiers, the government being in great financial difficulties at the time owing to the German indemnity. The treaty was, however, renewed next year. After a series of attempts for a definite renewal on an improved basis from the free trade point of view, the treaty was practically abandoned in 1882, when as a substitute the French government passed a law, giving to England the benefits of the "most favoured nation" treatment. France was thus left free to raise the duties on any article at once, and by simple repeal of the law to treat England less advantageously than other nations.

The French treaty of 1860 has been described at some length, because in connection with it the whole question of the principles of commercial treaties has been raised and discussed. The principal arguments for and against may be enumerated under five headings.

(1) The opponents of commercial treaties appeal to their failure in the past to secure the advantages for which they were ostensibly negotiated. So long as the NAVIGATION ACTS remained in force, they naturally gave rise to retaliation by other nations, and the retaliation was met by reciprocity treaties with various countries on various conditions. The complications which ensued were so great that they had much to do with the ultimate repeal of the acts. This is only one example of the alleged failure of treaties in the past, but it is maintained that on the whole they have produced more harm than good. To this it is replied by the advocates of the system that the old ideas on which such treaties were based were economically unsound, being survivals of the mercantile system; but that the French treaty and others drawn on similar lines have proved beneficial in recent times, and that the appeal to the past can only be fairly made when all the circumstances of the case are considered.

(2) It is objected to commercial treaties that, in appearance at least, if not in reality, they are opposed to the principles of free trade. Even although no differential duties are imposed, and all nations are ostensibly treated with equal favour, still it is said that if a free trade nation arranges its tariff out of consideration to the revenue of another country, so far that nation is "favoured" relatively to others, and that this amounts to an infringement of free-trade principles. To this it is replied that commercial treaties afford a middle way between protection and free trade, and that if other nations, by means of a treaty, are brought to see the advantages of a reduction of tariffs, they may ultimately follow the example of England (MOST FAVOURED NATION CLAUSE), repeal many of these duties altogether, and eventually adopt free trade. Such was the opinion of Cobden, and it was supported by Lord Morley, Cliffe Leslie, and many other free-traders.

(3) It is alleged that it may prove inconvenient to a government to have its hands tied for a definite term of years on fiscal matters, as England was bound, for example, not to increase the wine duties nor to impose an export duty on coal. To this it is replied that the fixity of a tariff is advantageous for the stability of trade.

(4) This reply leads to the further objection that, as the time of the treaty approaches fulfilment, there will be a great disturbance in trade whilst the new negotiations are in progress, and again an appeal is made to the experience with France after the first ten years had been completed. The obvious answer is that the disturbance is only temporary, and in any case that a treaty subject to the possible failure of renewal is better than none at all, so far as the convenience of traders is concerned.

(5) The objection made by the extreme advocates of free trade, which, if valid, would be the strongest possible, is that there is really no use in such treaties; that a nation should rely simply upon free imports to fight foreign tariffs, and that the exports can be left to take care of themselves. Suppose, it is said, that England of her own accord, and without any equivalent treaty, reduces the duties on French wines and silks, and thus encourages importation; still these imports must in the end, directly or indirectly, be paid for by exports; if France excludes our goods directly, then she must accept payment from other nations which do accept our goods. The best answer to this argument is perhaps that given by Lord Morley (*Life of Cobden*, vol. ii. p. 343). "The decisive consideration is that we can only procure imports from other countries on the cheapest possible terms on condition that the producers in those countries are able to receive our exports on the cheapest possible terms." This opinion may also be supported by the authority of Adam Smith, who always maintained that the near trade was more advantageous than the remote, and the direct than the roundabout trade.

[See TARIFF REFORM MOVEMENT, App.—Schanz, *Englische Handels-Politik*, Leipzig, 1881.—Adam Smith, M'Culloch's edition (1872), Note on Commercial Treaties.—Cliffe Leslie, *Essays on Financial Reform*, Cobden Club, 1872.—List, *National System of Political Economy*.—Morley's *Life of Cobden*.—Sir Thomas Farrer, *Free Trade versus Fair Trade*.—*Four Letters on Commercial Treaties* (Cobden Club), 1870.—Mallet's *Free Exchange*, 1891.] J. S. N.

COMMISSARY. See SUCCESSION (SCOTS LAW).

COMMISSION AGENT. A person entrusted by a principal with the sale or purchase of goods and receiving a commission for his remuneration. Commission agents generally sell or buy in their own name, and therefore deal as principals with the buyers or sellers; but, as regards the mutual relations between them and their principals, they are bound by the ordinary rules of the law of agency. E. S.

COMMISSIONS OF ENQUIRY. It has long been the practice in the United Kingdom to appoint, under a royal warrant, commissions to institute enquiries, to collect information, and to report concerning matters of special public interest as to which it is felt to be necessary to obtain the assistance of well-informed persons whose services are not ordinarily at the disposal of the government. The scope of such enquiries is carefully defined in the warrant constituting the commission, usually described as the

"reference," and the commission is invested with power to summon witnesses and to call for such records, books, and papers as in its judgment may serve to throw light on the subject of the enquiry. The first person named in the reference is usually considered to be nominated as the chairman of the committee, and a secretary, not himself a member of the commission, is also appointed. The commission itself decides the course which its proceedings shall take. It frequently arranges, in the first instance, for the issue of such circular letters as may appear calculated to elicit general information, and it then proceeds to hear oral evidence. The first witnesses called are ordinarily those government officers who, from the position they occupy, may be presumed to have a special knowledge of the subject in hand. The examination in chief is conducted by the chairman, each member of the commission in turn having an opportunity of questioning the witness. In some cases, additional or assistant commissioners are appointed to prosecute subordinate enquiries in distant places and even in foreign countries. These usually receive payment for their services, as does also the secretary, unless he be in the permanent employment of the government, in which case it is customary to award him a bonus when the work of the commission is at an end. The commissioners themselves are ordinarily unpaid. When the commission has obtained all the evidence it considers necessary, it prepares and presents its report, which, with an exact transcript of the evidence and the documents forthcoming in the course of the enquiry, are then laid before both houses of parliament and sold to the public. Commissions of enquiry obtain and arrange in a convenient form a vast amount of information of great value, and in this their main utility exists. Parliamentary and political reasons frequently prevent the carrying out of the recommendations of commissions, it being impossible to dissociate from the government of the day the final responsibility for any action taken on the basis of their reports.

The following are among the principal commissions of enquiry appointed since 1830, to consider subjects of economic interest:—

1832. Poor Laws.
1833. Employment of Children in Factories.
1836. Irish Railways.
1840. Employment of Children in Mines.
1843. Scotch Poor Laws.
1843. Irish Land Laws.
1853. Shipping Dues.
1855. Decimal Coinage.
1863. Fisheries.
1866. Duration of Coal Supply.
1867. Trades Unions.
1868. International Coinage.
1875. Labour Laws.
1876. Factory and Workshops Acts.
1881. Agricultural Interests.
1885. Housing of the Working Classes.
1886. Depressions of Trade and Industry.
1887. Gold and Silver.
1891. Labour.
1905. Poor Laws and Relief of Distress. T. H. E.

COMMISSIONS, JUDICIAL. The general tendency of English legislation has been to reserve all judicial business for the courts of justice. But in modern times certain important functions of a judicial character have been entrusted to commissions differing in many respects from the ordinary courts. The motives for establishing such commissions instead of increasing the regular judicial staff have been various. A particular class of cases may demand such a technical knowledge of subjects not legal as cannot reasonably be expected from a professional judge. Thus the class of cases which comes before the Railway Commission requires an exceptional acquaintance with the principles of railway organisation and management. Or again, the judicial function to be performed may be one which the law has never contemplated, and for which the principles of jurisprudence afford no guidance. Thus the principal function of the Irish Land Commission and the Scotch Crofters' Commission was to set aside existing contracts of land-tenure and to determine what is called a "fair rent." In these cases the function of the commissions was rather political than legal; it was to reduce that resistance to the fulfilment of legal obligations which is never recognised by a jurist, although it may sometimes be troublesome to a statesman.

Commissions such as these differ from normal courts of justice principally in three respects—(*a*) jurisdiction; (*b*) composition; (*c*) procedure.

(*a*) *Jurisdiction.*—Whilst an ordinary court of justice has usually jurisdiction to deal with many kinds of cases, a judicial commission is commonly confined to dealing with cases of a particular class. Thus the main function of the Railway Commission is to ensure impartial treatment of all persons or corporations using a railway, and to arbitrate in disputes between railway companies or canal companies. The main function of the Irish Land Commission and of the analogous commission in Scotland was to deal with disputes between landlord and tenant.

(*b*) *Composition.*—In the United Kingdom, at all events, it is the uniform practice to select the judges exclusively from the legal profession. But judicial commissions usually include other persons as well as professional lawyers. Thus the Railway Commission, as originally constituted (Regulation of Railways Act, 1873, 36 & 37 Vict. c. 48), consisted of three commissioners, of whom one was to be of experience in law, another of experience in railway business. In its later form (Railway and Canal Traffic Act, 1888, 51 & 52 Vict. c. 25), the

Railway Commission consists of two appointed commissioners, including one of railway experience and three *ex-officio* commissioners, namely, a judge of a superior court in England, in Scotland, and in Ireland respectively. The Irish Land Commission (Land Law Ireland Act, 1881, 44 & 45 Vict. c. 49) consisted of three commissioners, one of whom must be a barrister of ten years' standing and held office for life, whilst the other two need not be lawyers and were appointed for a term of seven years. This commission, however, delegated most of its work to sub-commissions. Barristers, solicitors, and persons possessing a practical acquaintance with the value of land in Ireland were competent to be appointed to the office of assistant-commissioner. The Crofters' Commission consisted of three persons, of whom one must be an advocate of ten years' standing.

(*c*) *Procedure.*— The procedure of such a judicial commission as above described is wholly determined either by the statutes under which it acts or by rules drawn up by itself. There is no implied adoption of any system of procedure followed in any of the regular courts. At least such adoption is limited to one or two equitable principles, such as that of hearing both parties to a dispute, which we hardly regard as technical. Appeals to a superior court on questions of fact are not allowed, since this would defeat the purpose of instituting such commissions; but appeals on questions of law are in some cases permitted. Such commissions as above described are for some purposes a necessity of the body politic. But their unnecessary multiplication would be a great evil. A tribunal established to deal with a special class of cases is often the readiest instrument of injustice or oppression. Everybody is interested in the impartiality of a court before which he may appear as defendant. But many unfortunately will applaud partiality in a court where defendants belong exclusively to an unpopular class like landlords or railway companies. As compared with judges who are also jurists, judges who have had no legal discipline are less likely to deal with causes in a severely judicial spirit, to consider sufficiently the consequences of making a precedent, or to uphold that stringency of procedure which, tedious as it may seem, is the best safeguard against passion or carelessness. Hitherto the predominance of the regular courts of justice has protected us from most of the evils which might have been feared from commissions armed with judicial power. But the multiplication of extraordinary tribunals and of special procedures would break down this predominance, and with it the old English principle of submitting to a regular court for adjudication in the regular way every question which can be formulated in terms of law—a principle always precious and always difficult to maintain, but in an age of popular government especially invaluable and yet especially liable to be overthrown.

[Respecting the Railway Commission see the Acts 36 & 37 Vict. c. 48, and 51 & 52 Vict. c. 25, and the Acts therein referred to, and the Ministry of Transport Act, 9 & 10 Geo. V. c. 50; report of the joint-committee of Lords and Commons on railway amalgamation, 1872; and the text-books on the law relating to railways.

Respecting the Irish Land Commission, see the Act 44 & 45 Vict. c. 49 and the amending Acts. See also the rules issued by the Irish Land Commission, especially those of October 1881.

Respecting the Crofters' Commission see the Act 49 & 50 Vict. c. 29 and the amending Act.]

F. C. M.

COMMISSIONER. See FACTOR.

COMMISSIONERS OF SEQUESTRATED ESTATE. See BANKRUPTCY, SCOTLAND.

COMMITTEE (with reference to cases of lunacy). A person charged to represent the interests of a lunatic, either as committee of his person or as committee of his estate. Committees are appointed for those lunatics only whose mental incapacity has been established by the inquisition of one of the masters in lunacy, either with or without the assistance of a jury. The same person is frequently appointed in both capacities, *i.e.* as committee of the person and of the estate of a lunatic. The administration of the property of a lunatic so found by inquisition is to a great extent under the control of the lunacy authorities.

E. S.

COMMITTEE OF INSPECTION (bankruptcy). A committee consisting of not less than three and not more than five persons, selected from the creditors of an insolvent debtor at the first or any subsequent meeting of creditors, for the purpose of superintending the administration of the bankrupt's property by the trustee. The trustee cannot exercise certain powers without the permission of the committee of inspection, and the committee can take the initiative in certain other proceedings. The appointment of a committee of inspection is not compulsory, and the act provides that in the absence of such a committee the Board of Trade is to exercise its functions. [See Bankruptcy Act, 1883, 46 & 47 Vict. c. 52, specially §§ 22, 57, 58 (2), 64, 74 (4), 89 (1), also Bankruptcy Act, 1890, 53 & 54 Vict. c. 71, § 5.]

E. S.

COMMODATUM. A term of Roman law used to express the loan of a thing which had to be returned in specie (*i.e.* in the same kind).

COMMODITY. The idea of something commodious in the way of usefulness is never absent from the use of this word in an economic sense, but to this meaning a very wide interpretation is given by some economic writers, while others are disposed to restrict its application much

more closely. A. Smith (*Wealth of Nations*, bk. iii. ch. iii.) defines the difference between productive and unproductive labour as that which does or "does not fix and realise itself in any permanent subject or vendible commodity which endures after that labour is past, and for which an equal amount of labour could afterwards be procured." Ricardo (ch. i. § 1) uses the word in a somewhat different manner. "If a commodity were in no way useful, in other words, if it could in no way contribute to our gratification, it would be destitute of exchangeable value," and includes among "the mass of commodities," "rare statues and pictures, scarce books and coins, wines of a peculiar quality." With J. S. Mill (*Principles of Political Economy*, bk. iii. ch. ii. § 3), while other considerations come in, the word is employed mainly in the same sense as by Ricardo. Mill speaks of the product of labour as "utilities," among which he would class not only the labour of the physician and the teacher, but that of the musical performer and the actor. This idea is further developed by H. Sidgwick (*Principles of Political Economy*, bk. i. ch. iv.) who proposes to extend the terms "produce" and "commodities" so as to include "consumable services," such as the utilities developed by "literary, artistic, and scientific culture." In this view E. Cannan (*Elementary Political Economy*, pt. ii. § 2) includes "services which do not involve the production of a useful material object" among "commodities." The difficulty of exact definition of "productive" and "unproductive" labour has led to this extension of the use of the term "commodity." The examples from the authors cited above sufficiently explain this gradual development. The original use was wide, *e.g.* "Tickling commodity, the bias of the world" (*King John*), and elsewhere in Shakespeare frequently (*Twelfth Night*, *Henry IV.*, etc.)

COMMON ASSURANCE. The legal evidences of the transfer of real property. These have been called "common" assurances as opposed to special methods of transfer such as fines or recoveries.

[Stephen's *Commentaries*, bk. ii. pt. i. c. xv.]

J. E. C. M.

COMMON EMPLOYMENT, Doctrine of. "A servant, when he engages to serve a master, undertakes, as between himself and his master, to run all the ordinary risks of the service, including the risk of negligence upon the part of a fellow-servant when he is acting in the discharge of his duty as servant of him who is the common master of both." This extract from the judgment of Earle, C.-J., in Tunney *v.* Midland Railway Co. (L.R. 1 C.P. at p. 290) may be taken as a judicial statement of the doctrine of common employment first suggested in 1837 in Priestley *v.* Fowler (3 M. & W. 1), and afterwards adopted by the House of Lords. In the earlier cases various reasons were given in support of the doctrine, but in the later cases the tendency is to base the rule upon an implied contract entered into by the servant with his master that the latter should not be under any necessity to indemnify him from the negligence of a fellow-servant. In order to establish common employment it is not necessary that the servants should be employed about the same kind of work; it is sufficient that they are engaged under the same employer for the purposes of the same business, however different in detail those purposes may be. The relative rank of the servants is immaterial, and a stranger who voluntarily gives help is for the time regarded as a servant.

The legal effects of the doctrine have been to some extent modified by the 43 & 44 Vict. c. 42. Under that act a workman is entitled to compensation for injuries resulting from the negligence of a fellow-servant acting as a superintendent or under orders issued by the master. Special provision is made for railway servants, who may claim damages from their employer for the negligence of their fellow-servants in charge of any signal, points, locomotive engine, or train upon a railway. An employer is also made liable to his servants for any defect in the condition of the ways, works, machinery, or plant connected with his business. The right to claim compensation is, however, burdened with numerous onerous conditions.

[*Addison on Torts*, by H. Smith, London, 1887.—*Treatise on the Principles of Obligations arising from Civil Wrongs in the Common Law*, by F. Pollock, London, 1887. As to liability of employers in foreign countries, see *Parl. Pap. Commercial*, 1886, No. 21.—*Harvard Law Review*, December 1888. On the subject generally, see *Essays in Jurisprudence*, by F. Pollock, London, 1882.—*Parliamentary Papers*, H. C., 1876, No. 372; 1877, No. 285.—*Report of Select Committee*, 1886, No. 192.]

J. E. C. M.

COMMON GOOD (Scotland). Property belonging to a municipal corporation, administered by the magistrates.

A. D.

COMMONS. Upon the origin of rights of common there are two main theories. The *legal* theory, in its crudest form, traces the primitive form of property to individual ownership, and regards rights of common as being based upon the grant or the sufferance of an individual owner. The *historical* theory traces the natural or original form of property to common ownership, and sees in rights of common the survivals of an era before the evolution of individual ownership. So far as the soil of England is concerned, the balance of probability appears to be in favour of the view that the legal theory, with certain modifications, approximates most closely to the truth. The question may have more than antiquarian importance, because it has a direct bearing upon that theory of the nationalisatior

of the land which assumes as its basis the original common ownership of the soil. If the historical theory is correct, rights of common represent all that the encroachments of individual owners failed to absorb; if the legal theory is correct, rights of common represent the encroachments of servile tenants upon the possessions of individual owners. The essence of the Mark system or Teutonic village community of freemen is that the territory of the mark, or the soil occupied by the agrarian association, was owned by the community by which it was cultivated, or by the tribe or nation of which the community formed a part. Community of occupation and co-tillage are characteristic features of the Anglo-Saxon system of farming in the dawn of agricultural history (see AGRICULTURE IN ENGLAND). Writers like Maurer, Kemble, Freeman, Nasse, and others, have therefore argued or assumed that the mark system existed in this country in its pure form, and their contentions are supported by the researches of Sir H. Maine into the village community (see Digby, *History of the Law of Real Property*, and Joshua Williams, *Rights of Commons*). If this historical view is correct, then the manorial system is an encroachment upon the mark system, the "land-law of the noble" superseded the "land-law of the people," the mark of independent freemen was degraded into the manor of serfs and semi-servile tenants, and commons are a survival of the primitive form of property which existed in this country. This view is taken by Elton (*Tenures of Kent*), who dates the encroachments of individual upon common ownership, and of the manor upon the mark, from the reign of Edward the Confessor. But it is doubtful whether the mark as a system of land ownership ever existed in this country. As a unit of local administration it is assumed by Stubbs (*Constitutional History*, vol. i. 83-86), but even this assumption is open to question (see Lodge's *Anglo-Saxon Law*, p. 82). Although, as a means of farming, the mark system indisputably prevailed and regulated the agriculture of the country till the 19th century, Seebohm (*Village Community*) has shown good reason to doubt whether the partners of the association were ever in this country the independent owners of the land they tilled, and whether they were not always tenants tilling soil over which they enjoyed regulated customary rights, but of which they were not the owners. He proves beyond all question that in many cases the land was in Anglo-Saxon times owned by individuals and cultivated by communities who held under their lords by semi-servile tenure. These estates readily adapted themselves with the slightest possible changes to the Norman system of manors. Thus modified, the legal theory is probably most near the truth. According to Blackstone (*Commentaries*, ii. 92) and Coke (*Complete Copyholder*, p. 8, etc.), rights of common existed subsequently to manors, and originated in the grant or the sufferance of the lord. And this is the legal basis upon which common rights rest. As a question of fact it may still be disputed whether rights of common over the wastes of a manor are exercised by the association of farmers in virtue of their former ownership of the soil, or by the grant or sufferance of the individual owner, whose tenants they are. But there can be no dispute that since the Norman Conquest such rights are legally of the nature of exceptional rights granted over land by its real owner to his tenants. They are of four kinds: (1) *Appendant, i.e.* attached or incident to the tenancies of freeholders; (2) *appurtenant, i.e.* enjoyed by strangers in respect of land not belonging to the manorial estate; (3) *in gross*, irrespective of land at all; (4) *customary, i.e.* enjoyed by copyholders. Such rights differ not only in origin but in kind. Thus there may be commons of pasture, of piscary (fishing), of turbary (turf-cutting), of estovers (cutting or taking wood).

The later history of commons is a history on the one side of attempts to extinguish the rights enjoyed, and on the other of efforts to resist such encroachments. At first no public rights were recognised; resistance was made if at all, in the interests only of the commoners. Opposition to the enclosure of commons entered upon a new phase in 1845 (Gen. Inclosure Act, 8 & 9 Vict. c. 148), when the necessity of preserving commons as places of recreation or as breathing spaces in crowded districts was recognised. Considering the untempered condemnation which has been passed on the Inclosure Acts by popular speakers and writers in recent years, it is amusing to contrast Bentham's opinion that "the tendency of the General Inclosure Bill seems alike favourable to the interests of the *rich* and *poor*." . . . "It effects the raising of the wages of labour" (Poor Bill introduced by Mr. Pitt, *Works*, vol. viii. p. 449). Miss Martineau in her illustrations of political economy is equally partial to enclosures. We may therefore distinguish between (A) *commoners' opposition up to 1845*, and (B) *public opposition after 1845*. (A) Legislation to limit and restrain the rights of lords of manors to enclose their wastes begins with the statute of Merton (1235) and the statute of Westminster (1285), which protected respectively commons *appendant* and commons *appurtenant*. Down to the year 1800 commons could only be enclosed by means of private acts of parliament. But under the pressure of increasing population it was necessary to utilise every available acre. In 1801, through the exertions of Young and Sir J. Sinclair, an Inclosure Act was passed (41 Geo. III. c. 109) which incorporated the provisions generally in

cluded in the special acts, and regulated, and at the same time facilitated, the enclosure of land. The following statistics of enclosures illustrate the extent to which agriculture progressed in the latter half of the 18th century. Between 1700 and 1845 there were 3835 enclosure acts and 7,572,664 acres enclosed, the total area of Great Britain being 56,786,199 acres, and the cultivated area about 32,500,000. Of this total number 3209 acts were passed in the reign of George III. and 6,288,910 acres enclosed. (B) Signs of the change of policy which protects open spaces are previously seen in 18th century tracts (*e.g. Inquiry into the Influence of Enclosures on Population* (1786), or *Advantages and Disadvantages of Inclosing* (1772)), and in the debates upon the Inclosure Bill of 1836 (see Hansard 35, 1226 and 1271). But the new policy received full expression in 1845, when the General Inclosure Act was passed (8 & 9 Vict. c. 148). It was primarily passed to facilitate the enclosure of commons and wastes which impeded the productive employment of land, and for this object it appointed commissioners who were to decide whether or not enclosures were expedient. But it protects commons within a certain distance of London or large towns from enclosures, requires the appropriation of allotments for the exercise and recreation of the neighbourhood, and declares that no village greens shall be enclosed. But it was felt that the commissioners did not sufficiently protect the public. And in this direction legislation has since that time advanced. The public and not the landlord is now treated as the real owner. The Metropolitan Commons Act, 1866, was passed in this spirit. In 1869 a committee of the House of Commons reported on metropolitan commons, and suggested various alterations in the existing law of enclosures. Many of their suggestions were embodied in the Inclosure Act of 1876. The preamble of this act shows how completely the spirit of legislation was changed. It expressly forbids the commissioners to sanction any enclosures unless they are satisfied that such enclosures will benefit not only private interests but the neighbourhood. Clauses in the act also provide for the management, protection, and preservation of commons. Commons may now be enclosed in one of three ways—(i.) they may be appropriated by railway companies under the powers of their acts; (ii.) they may be enclosed under the Inclosure Act; (iii.) they may be enclosed by an individual owner who claims to be legally entitled to enclose.

[For works relating to the subject of enclosures see, in addition to those quoted in the text, Fitzherbert on *Surveying* (1523).—Tusser's *Comparison between Champion Country and Several* (E. E. Text Society).—Lee's *Regulated Inclosure* (1556).—Lawrence's *Duty of a Land Steward* (1727).—Young's *Enclosure of Wastes* (1801).—*Reports of the Board of Agriculture*, 1793-1813.—Elton's *Commons and Waste Lands.*—Woolrych's *Rights of Commons.*—Scrutton's *Commons and Common Fields.*] R. E. P.

COMMONTY (Scotch). Common or waste, over which there are rights of common. A. D.

COMMUNE. When a group of families forming a tribe cease to lead a wandering life and settle down in a fixed place of abode, the commune springs into being. At present, in India the *village communities* are considered as composed of families descended from a common ancestor.

The commune is society's primary organic cell. A collection of communes united under the rule of a sovereign power forms the state. Primitively in all countries the commune was a political body where autonomy reigned, and which itself regulated all the local interests of its inhabitants. We see this in the Anglo-Saxon *Tunscip*, in the *Township* of New England, in the Germanic *Gemeinde*, in the *Gemeente* of the Netherlands, in the *Communautés* of the Neo-latin peoples, in the Russian *Mir*, in the Javanese *Dessa*, in the Indies, and in Japan, China, and Arabia, or in other words, in all climates and amongst all races. As the families living on the communal land have common interests to be considered and provided and legislated for, it necessarily follows that the commune becomes a sort of institution of the economic order. This is clearly apparent in following the birth and development of the New England townships.

As soon as a *plantation* is formed, the heads of the different families meet together in the spring-time, every year, in a town-meeting, to consult respecting public interests, and to appoint the various functionaries to fulfil the same: *Churchwardens* for the supervision of matters connected with the church; *overseers of the poor* to distribute succour to the needy; *highway surveyors* to maintain the roads in good order; *fence viewers* to overlook the hedges, gates, and enclosures generally; *wardens* for the repression of drunkenness, cruelty to animals; *constables* or police for the maintenance of general order; and *school trustees* or school-board officers to attend to the schools and appoint competent masters and mistresses. Everywhere, too, at the commencement, as I have shown in my book *Primitive Property*, the commune reserved the greater portion of its land as common pasture ground (commons), where all the inhabitants had the right to send their cattle to graze, and the remainder was periodically divided up between all the families of the commune, with the exception of the little plot surrounding each dwelling, which was the private property of the owner. According to Cæsar and Tacitus, this was the agrarian system which existed among the Germanic races, and it may still be found at the present

day, with precisely the same distinctive characteristics, in the Russian *Mir* and in the Javanese *Dessa*. If one be desirous of studying the working and results of this system on a small scale, one may do so in the *allmends* of Switzerland and southern Germany. The level land lying along the shore of the lake of Brienz, between Interlaken and Bönigen, is the *allmend* of this latter village. It is divided into small plots where vegetables and fruit-trees are cultivated. Each of these plots is owned by the head of a family for his life. The communal *allmend* comprises forests, which supply the inhabitants with wood for firing and building purposes, pasturage where their cattle can graze in summer, and arable land whence they can procure a portion of their sustenance. The commune is thus a sort of hive which furnishes each family with supplies, and thus attaches it to the soil of the *Alma Mater*.

At the present day, owing to the growing exigencies of civilisation, the commune is step by step recovering the economic status it possessed at the outset. This is plainly observable in countries where civilisation is the most advanced, in the United States and Scotland, for instance. The city of Glasgow may be mentioned as an example. The city here not only opens schools for the entire population but also supplies the drinking water, the gas, lights at its own expense the common staircases of large lodging-houses, lets out heating apparatus, stoves, and fixtures, at a low rental; it considers tramways to be a part of the street, and allows them to be worked by a company only on the fixed condition that the price shall not exceed a penny a mile, and that morning and evening cars be run for workmen at half-price. The local sanitary legislation is also thoroughly perfected. There is complete municipalisation of markets and slaughter-houses; the city also entered upon a scheme of wholesale demolition of slums and overcrowded districts, in view of better housing of the poor, and now it is building houses on sites it has cleared, and will then enter upon the functions of house landlord; it has also opened a series of common lodging-houses, having accommodation for 2000 persons nightly, and has established a magnificent system of baths, swimming-baths, and wash-houses; it maintains a corps of lady inspectors who go about among poor families to inculcate domestic cleanliness; it has entered upon the general laundry business, and is serving families at the current prices. Museums of all sorts, parks, playgrounds, and public libraries have been opened to foster the progress of civilisation.

It may be seen, in fact, in all parts of the world that the old "commune" notion is gaining ground more or less rapidly, and the socialistic ideal of the state as a providential power doing its best to remedy the results of social inequality, is little by little forcing itself upon the world. Attention can only be drawn here to this fact. Its advantages and disadvantages must be elsewhere discussed. One thing, however, appears probable, that in the future organisation of society, communes will, as at its outset, play an important economic part.

[E. de Laveleye, *Primitive Property*, trans. 1878.] E. de L.

COMMUNE OF PARIS, 1871. It is widely believed in England that the Commune of 1871 was primarily a communist institution. In denying this the better informed are apt to merely explain the true meaning of the word COMMUNE (*q.v.*), and leave the impression that the establishment of the Commune was only an extreme application of the principle of local self-government (*e.g.* P. G. Hamerton, *French and English*, 1889, p. xii. n.) This is nearly as incorrect as the more common belief. It is quite true that adherents of the Commune are not properly called "communists," the French word being not *communistes* but *communeux* or *communards*, but it is not the case that the Commune movement was a purely political affair. Local and temporary circumstances made its short-lived success possible, but any real strength which it possessed was entirely contributed by the partisans of a social or economic revolution. About one-third of the members of the council of the Commune were connected with the INTERNATIONAL (*q.v.*) The chief economic measure, passed by it or recommended by its committee on labour and exchange, which was entirely composed of socialists, provided for the remission of house rents for the period covered by the siege, the gratuitous return of all articles under £1 in value pawned at the Mont de Piété, the establishment of a list fixing the wages of labourers in communal contracts, and the transference of workshops abandoned by their owners to associations of workmen (*v.* ANARCHISM).

[Lissagaray, *Histoire de la Commune de* 1871, Bruxelles, 1876.—J. Leighton, *Paris under the Commune*, 1871.—P. Délion, *Les membres de la commune et du comité central*, 1871.—G. de Molinari, *Les Clubs rouges pendant le Siège*, 1871.—É. de Laveleye, *Le Socialisme Contemporain*, Bruxelles, 1881, pp. 273, 279-282, 309, 310.—B. Malon, *Histoire du Socialisme*, 1883.] E. C.

COMMUNICATION, MEANS OF. Modern facilities for communication between one district and another are so complete generally that the fact that these facilities are comparatively recent is not unfrequently forgotten. Their economic value is so great that it is scarcely possible to over-estimate it. A reference to the condition of matters before present facilities existed in England will enable this to be better understood. Porter, in his *Progress of the Nation*, written 1842, makes the following observations on a part of Sussex now practically included among the suburban districts of the metropolis, and acces-

sible, when Porter wrote, within four hours of London. "An inhabitant of Horsham, in Sussex, lately living, remembers, when a boy, to have heard from a person whose father carried on the business of a butcher in that town, that in his time the only means of reaching the metropolis was either by going on foot or riding on horseback, the latter of which undertakings was not practicable at all periods of the year, nor in every state of the weather; that the roads were not at any time in such a condition as to admit of sheep or cattle being driven upon them to the London markets, and that for this reason the farmers were prevented sending thither the produce of their land, the immediate neighbourhood being, in fact, their only market. Under these circumstances, a quarter of a fat ox was commonly sold for about 15s., and the price of mutton throughout the year was only five farthings the pound." This illustration, as every one can supply the present condition of matters for himself, shows the effect of improved internal communication within a recent period and a restricted area. Mr. E. Atkinson has in his publications, *The Relative Strength and Weakness of Nations*, etc., recorded the corresponding but even greater effect of similar facilities in the United States of America—"The wages for one day's work of an average mechanic in the far East will pay for moving a year's subsistence of bread and meat a thousand miles or more from the distant West." These instances of results from improvements of means of communication illustrate comparatively recent changes, brought about by their means, in production, price, etc. Further development will, no doubt, be as active a factor in the future as it has been in the past. The main part of the comforts and conveniences of life, the whole work of commerce, to refer to no other points, depend on the power of ready communication, which, in its turn, depends almost as much on the absence of obstruction on the part of governments for fiscal and other purposes, as on the extension of mechanical facilities (see RAILWAYS; CANALS; TRANSPORT, COST OF INLAND).

[Many economic problems presented by modern means of communication, including remarks on their utility to the community and the measurement in money of that utility, are discussed with great originality by Dupuit in the *Dictionnaire de l'Écon. Politique*, under the heads *Routes et Chemins, Voies de Communications*, abridged from certain longer memoirs to which reference will be found under DUPUIT.]

COMMUNIO. An expression of Roman law applied collectively to a number of persons jointly interested in some property or undertaking. If the joint interest arises by contract, the Roman writers speak of *societas* (partnership); if it is created by accident (as for instance in the case of joint heirs) the expression *communio incidens* is used by later writers. E. S.

COMMUNISM is the theory which teaches that the labour and the income of society should be distributed equally among all its members by some constituted authority. For an example of what communists mean by equal division of labour and income the following explanation may suffice:—"Here equality must be measured by the capacity of the worker and the need of the consumer, not by the intensity of the labour and the quantity of things consumed. A man endowed with a certain degree of strength, when he lifts a weight of ten pounds, labours as much as another man with five times the strength when he lifts fifty pounds. He who, to satisfy a burning thirst, swallows a pitcher of water, enjoys no more than his comrade who, but slightly thirsty, sips a cupful. The aim of the communism in question is equality of pains and pleasures, not of consumable things and workers' tasks" (Buonarroti, *Conspiration de Babeuf*, i. 297). (See BUONARROTI.)

As communism involves the conception of society as an industrial association for the production of wealth, it is of modern origin. That conception certainly played no part in the institutions attributed to Minos and Lycurgus, nor in those suggested by Plato in the *Republic*. The equal distribution of wealth among a governing class was then upheld as desirable wholly from a moral and political, not at all from an economic, point of view; equality of distribution, and, still more, equality of labour, among the whole population, would have been utterly abhorrent to the minds of Greek statesmen and philosophers, if they had been able to conceive the idea. The practice of the earliest Christians described in Acts ii. 44, 45; iv. 34, v. 8, has generally been considered as communistic, but all that is actually said is that a number of persons sold their property and gave the proceeds to be distributed among their poorer fellows, who doubtless treated what they received as income; in this there would have been no communism even if the gifts had been compulsory, and Peter's words to Ananias show that they were not. The first exposition of communism is to be found in Sir Thomas More's *Utopia* (see MORE, Sir T.) published at Louvain in 1516. Written in Latin, the Utopia was accessible to all the learned world of the time; at first in the original, and afterwards in translations, it has had an enormous number of readers. After a severe criticism of capital punishment for theft, of the habit of maintaining a multitude of idle followers, and of the extension of pasture at the expense of arable land, More enters on the description of a nation numbering apparently three or four million souls, living a simple life without private property, under elected officers who fix the duration of requisite labour and generally direct production. Distribution

is supposed to effect itself without difficulty, as the impossibility of ostentation and the general abundance prevent any one from demanding more than his fair share: "It is the fear of want that makes any of the whole race of animals either greedy or ravenous." Division of labour exists, but, agricultural labour being a "hard course of life," every one must take his turn in the fields. The institution of marriage is only slightly modified, but the adoption of children is largely practised in order to keep all the families nearly equal in size. Increase of population, if there is any, is dealt with by emigration. There is a small class of unenfranchised persons or slaves, consisting of convicts condemned to hard labour, prisoners taken in battle, and foreigners who have entered the service of the Utopians voluntarily. As a substitute for the stimulus to industry provided by self-interest when private property is established, the fact that "all men live in full view" is put forward.

It is highly improbable that More considered his book as anything more than a picture of an entirely ideal state of society, towards which some approximation might possibly be made in certain particulars. Not until the era of the French Revolution did a communist organisation of society come to be thought of as something to be actively striven for, and completely realised at no distant date. The *Civitas Solis* (1620) of CAMPANELLA (*q.v.*), a work of small merit and importance (for a translation, see *Ideal Commonwealths*, in Morley's Universal Library), is far less practical than the *Utopia*. The immediate precursors of the communism of the Revolution were Morelly and Mably, writers who, in accordance with the fashion of their day, placed their utopias in "the state of nature." MORELLY (*q.v.*), in his *Code de la Nature* (1755), taught that man naturally possesses every virtue, and is only depraved by bad institutions, the chief of which is private property. Every one would be industrious, he thought, if it were not that some are deterred from labour by the enervation of riches, and others by the desperation of poverty. He declared, therefore, that it would be "in conformity with the intentions of nature," if every citizen contributed to the resources of the state, in accordance with his strength, talents, and age, and in return were wholly maintained at the public expense. Every one was to engage in agriculture between the ages of 20 and 25. Celibacy was not to be allowed. MABLY (*q.v.*), who was a brother of CONDILLAC (*q.v.*), in Letters I. and II. of *Doutes proposés aux philosophes économistes sur l'ordre naturel et essentiel des sociétés politiques* (1768), endeavoured to show, in opposition to MERCIER DE LA RIVIÈRE (*q.v.*), that private property in land is not the natural and necessary basis of society. On the contrary, he said, society could exist, without property, as is proved by the cases of Sparta, the Jesuits in Paraguay, and the monastic orders; while the establishment of property in land and inequality of condition, has been the great source of avarice, ambition, and vanity. In his *Traité de la Legislation* (1776), Book I., he maintained the same views, and incidentally described the communist arrangements which nature, as he thought, dictated to primitive man; he imagines "the citizens distributed into different classes, the more robust are appointed to cultivate the earth, the rest work at the rough handicrafts with which society cannot dispense." "To exclude idleness, all that was necessary was to encourage labour by passing laws which should awaken in the citizens the natural instinct which induces us to seek the esteem of our fellows, and to fear their contempt." But it was undesirable, he admitted frankly, to try to restore the lost condition of natural equality. The rich would resist any such attempt, and it is doubtful if the poor would support it, and still more doubtful if they "could adopt the feelings which would be in harmony with their new position," if the attempt were successful.

The Revolution in France was economic as well as political. It made the people far more equal in wealth than before. But a mere redistribution of property, even when it makes wealth more equal, is not a communist measure, and need not tend in a communist direction. The creation of a great number of small freeholders, which was greatly promoted by the Revolution, is considered to have strengthened the institution of separate property. Though there was a large class which desired to reduce or destroy the inequality between rich and poor, there were but few who saw that the only way to create and maintain equality in wealth was to establish complete communism, and were at the same time convinced of the practicability of such a change. BABEUF (*q.v.*) and his fellow-conspirators of 1796, who called themselves the "Equals," were the most remarkable representatives of this small party. How far the Equals had actually thought out a scheme of communism is not very easy to decide, since the history of their conspiracy, written by their ablest member, Philippe Buonarroti, was not published till 1828. Buonarroti admits that he describes their economic plans almost entirely from memory; he has probably added many ideas which belong in reality to a later date than 1796. In the Babouvist Utopia, as described by Buonarroti, every one is allotted two different occupations, the one light and the other hard. To give variety and change of scene, all are employed by turns in the transport and postal services. Those who will not work are treated as thieves are treated under the system of private property. Education, carried on in vast boarding-schools, subordinates

family affection to patriotism. The increase of population is stimulated to the utmost. Distribution is ruled by the principle of strict equality of pains and pleasures. The transition to this state of things was to be effected by establishing at once the skeleton of a great national community, which would rapidly acquire all property by means of free gifts and escheats, bequest and inheritance being totally abolished. For the existing generation adhesion to the community would be voluntary. Whether the heads of the Babouvist conspiracy desired to carry out some such scheme as this or not, their immediate object was to overthrow the Directory, and for this purpose appeals to the love of plunder, in which they dealt very freely, were likely to be more useful than elaborate schemes of orderly communism. After the discovery and defeat of the plot, and the execution of Babeuf (May 1797), the revolutionary spirit slumbered for a time, and communism, which was as yet nothing more than an incidental outcome of the desire for destruction, slumbered also. The schemes of SAINT-SIMON (*q.v.*) and FOURIER (*q.v.*), which soon began to occupy the attention of those who were inclined to wish for social reorganisation, though they involve distribution by constituted authority, cannot properly be considered communistic, as they lack the essential characteristic of communism in not being founded on the principle of equality. Buonarroti's book, printed at Brussels in 1828, but not much read in France till some time afterwards, revived to some extent the idea of communist equality, and led to the publication (1837-40) of the *Moniteur républicain*, the *Homme libre*, and a number of other short-lived and bloodthirsty communist newspapers. The insignificance of the Babouvist party was shown in the futile insurrection of 12th May 1839, when the followers of Armand Barbès, Martin Bernard, and Louis Auguste Blanqui, to the number of three or four hundred, obtained possession of the Hôtel de Ville for a few hours. In the next year merely destructive communism was practically superseded in France by "Icarianism," the creation of CABET (*q.v.*), thought out in England, where ROBERT OWEN (*q.v.*) was the chief teacher of communism.

Owen's communism was very different from that of Babeuf, Buonarroti, and their followers. It had its origin not in politics and a worship of the abstract principle of equality, but in practical philanthropy. The primary object of Owen was not to destroy the existing state of society, but to substitute for it a new state, the superiority of which he considered he had proved. Assistant master in an elementary school at the age of seven, draper's apprentice at ten, mule machine maker at eighteen, manager of an important cotton spinning factory at nineteen, and successful in each capacity, he had every claim to be considered "a practical man," and it was entirely through his own experience that he arrived at his schemes of social regeneration. The good effects of his treatment of the factory hands when manager and part-proprietor of mills in Manchester (1790-97) and New Lanark (1797-1828) established in his mind a theory that heredity is of very small importance as regards character, and that "it is impossible that any human being can form his own qualities or character," which are really formed by education and surroundings. This theory, if admitted, is obviously an excellent basis for communism. By its denial of moral responsibility it overthrows the common argument that poverty is generally "deserved," and that private property is therefore just. Further, it avoids the error of confounding wealth or material welfare with happiness, and it was suitable to a time when the desirability of making elementary education more general was beginning to dawn on the public mind. So Owen developed from the philanthropist manufacturer into the communist projector. In March 1817 he submitted to the House of Commons' committee, then considering the poor law, a report which he had drawn up for the "Association for the relief of the manufacturing and labouring poor." In this he proposed that the unemployed poor should be formed into communities of about one thousand persons, who should be provided with land and other requisites of production by the state, and support themselves by agriculture and manufactures. He says nothing in the report itself about the principle on which distribution within the communities should be effected, but in a letter to the newspapers of 30th July 1817, he argues that men will be as industrious "in a community of mutual and combined interests as when employed for their individual gain. . . . Wherever the experiment has been tried, the labour of each has been exerted cheerfully." When working by the day, he adds, the worker has no interest in his work, and when he works by the piece he is apt to overwork himself. "When employed with others in a community of interests both these extremes are avoided; the labour becomes temperate but effective, and may be easily regulated and superintended. Besides, the principles and practices are now quite obvious by which any inclinations from the most indolent to the most industrious may be given to the rising generation." The scheme was wonderfully well received; the *Morning Post* of 9th August 1817 declared that the "appeal, founded as it is upon genuine reason, virtue, and humanity, cannot possibly fail of success." But Owen, over-elated with approbation, went out of his way to declare at a public meeting on 21st August that the only reason his plans had not been adopted centuries ago was the errors of religion, which had

created enough bigotry and fanaticism to wreck not only a community but Paradise itself. This incident, which Owen grotesquely persisted in believing to be the most important event in the history of mankind, alienated much sympathy. Nevertheless in 1819 a committee (appointed by public meeting), of which the Duke of Kent, Ricardo, Torrens, and Sir R. Peel the elder were members, recommended the establishment of an experimental community by means of capital to be provided by a joint-stock company and on the principles of private property, communist distribution being strictly excluded. Nothing came of this, as subscriptions could not be obtained. In 1825 Abram Combe, a tanner of Edinburgh and disciple of Owen, in conjunction with Mr. A. J. Hamilton of Dalzell, obtained 300 acres of land and built a common dwelling-house for 100 families at Orbiston near Glasgow. About 300 persons willing to form a community were easily collected. Till a new generation fit for equality had grown up, it was proposed to distribute the income of the community according to the estimated value of the produce of each individual's labour. Combe died in August 1827, and the whole undertaking immediately collapsed. Meanwhile Owen was trying to establish a similar community in America. He bought, in 1825, the village of Harmony, Indiana, from the Harmony Society or Rappists, who wished to remove. He called the place New Harmony, and invited the "industrious and well disposed" of all nations and creeds to come and form a "preliminary society." Eight or nine hundred persons came, and the preliminary society, in which members were remunerated according to the amount of their services, was soon superseded (January 1826) by the definitive "community of equality," in which equality (modified by differences of need) was alone to regulate distribution. But the miscellaneous collection of individuals who had assembled in answer to Owen's comprehensive invitation never became united by any feeling of common interest, so that by November 1826 the official newspaper of New Harmony, edited by Owen's sons, had to admit that "New Harmony is not now a community." Attempts were made to form several smaller communities out of the ruins, but these all failed, and very soon scarcely a trace of Owen's scheme remained in America. In England from 1827 to 1832 the Owenites founded several hundred "co-operative societies." These consisted of persons who collected a small common capital by subscriptions and opened a shop, in the hope of accumulating from the profits of the business an amount sufficient for the establishment of a communist village. The system of sharing profits with customers which made co-operative societies successful at a later date had not yet been discovered, and the Owenite societies failed, and were soon almost entirely forgotten. Owen himself continued a firm believer in the speedy advent of "a new system of society." His Labour Exchange of 1833 (see LABOUR EXCHANGE) was intended to be in some way an intermediate step. "The Association of all Classes of all Nations" and "The National Community Friendly Society" were founded in 1835, the first to propagate his principles, and the second to promote the establishment of communities founded upon them. The two organisations were amalgamated in 1839 under the title of "The Universal Society of Rational Religionists." The chief product of the labours of these bodies was the "Queenwood community," a communist farm at Tytherley in Hampshire, of which Owen was persuaded to take charge in 1841. The experiment attracted much attention, and its failure, which occurred a few months after Owen's arrival, seems to have been the death-blow of Owenism.

ÉTIENNE CABET (*q.v.*), French advocate and deputy was condemned in 1834 to five years' exile in consequence of his violent opposition to Louis Philippe's government. He spent the five years in England, and after studying More's *Utopia*, and no doubt submitting to some extent to Owenite influence, began to doubt whether the political revolution for which he had hitherto been striving was all that was required for his country. He returned to France in 1839 a thorough communist, and in 1840 published his *Voyage en Icarie*. Though provided with a hero and heroine, and a somewhat thin thread of romance, in order if possible to attract the frivolous as well as the serious reader, this work, like the *Utopia*, consists chiefly of a description of an imaginary state where communism is established. But while More's ideal state is totally detached from ordinary life, Cabet's is described as having grown, in less than half a century, out of a state in which all the evils of private property were rampant. Icaria is France in 1890, as Cabet thought it should and might be. Unlike the Babouvists, however, he saw that the change could only be carried out by pacific measures. "Communism," he says, "intended for the happiness of all men, must not begin by throwing a large party into despair" (*Voyage*, p. 562, ed. 1845). "Communism cannot be established and consolidated except by the power of almost unanimous public opinion (*Ibid.* p. 515)." It has been objected that the transition to communism in Icaria is made to begin with a bloody revolution, but this revolution is apparently considered necessary in order to overthrow a very odious political tyranny. Democracy once established, the change to communism is carried out peaceably enough, it being an indispensable condition that the rich and the owners of property, great and small, should not have their habits and prejudices wounded (*Ibid.* p. 343). In his account

of the details of the transitory *régime*, Cabet adopts much of the scheme propounded by Buonarroti. In the completed Icaria, the distribution of wealth is regulated by the principle of equality interpreted to mean an extraordinary, and most people would think a very oppressive, uniformity. Every one is allowed, so far as possible, to choose his occupation, and the stimulus to industry is provided by regarding the idle man as a thief. Marriage, and family life are strictly maintained. Great importance is attached to education. The increase of population is not thought to require any checks.

For some of the French communists of the time, Icarianism was far too moderate a doctrine. They objected to the condemnation of violence and to the maintenance of marriage and the family. But the protests of Théodore Dézamy and others were of no avail against the wide circulation of Cabet's writings, and the Icarian school was soon supposed to number its adherents among working men by the hundred thousand. Warned no doubt by Owen's numerous failures, Cabet at first advocated only attempts to convert whole nations to communism, and deprecated the foundation of small communist societies, which "would do but little good if they succeeded, and much harm if they failed, as they were nearly sure to do" (*Voyage*, p. 564). Yet, urged on to some kind of action both by friends and enemies, he became himself the founder of such a society. After a consultation with Owen, he bought some delusive rights over a million acres in the north-east of Texas. On 3d February 1848, eighty-nine chosen men were despatched from Havre as the "first advance guard" of the multitudes who were expected to follow and establish an Icaria in America. Three weeks later Louis Philippe fell, and great numbers who had before been willing to emigrate now desired to remain in France and promote Icarianism in the new Republic, so that only about four hundred persons followed the "advance guard." When they arrived at New Orleans the advance guard had already abandoned the land in Texas, which was altogether unsuitable. Eventually about 280 of the colonists established themselves as a communist society at Nauvoo, Illinois, a settlement from which the Mormons had just retired. This community prospered fairly for some time, and increased, under Cabet's leadership, till it numbered some 600 members. On Cabet's expulsion in 1856, 180 of the members left with him and established a community at Cheltenham, near St. Louis, which lasted till 1864. The original community removed from Nauvoo to Icaria, Adams County, Iowa, in 1860. Its expulsion of Cabet had alienated sympathy in France, and it became surrounded by various difficulties. After the war its position gradually improved, but in 1877 there was another schism; the conservatives or old party became "the New Icarian Community," and the young party "the Icarian Community," each numbering thirty or forty persons. The old domain was divided between the two new communities, but in 1883 the "Icarian Community" decided to remove to Icaria-Speranza, near Cloverdale in California. (Albert Shaw, *Icaria; a Chapter in the History of Communism*, 1884.)

The Icarian communities may be regarded as relics of a movement the history of which is nearly confined to the first half of the nineteenth century. From 1848 socialism, of which the fundamental principle is that the whole income of society should be received by labour, not that it should be divided equally, has taken the place of communism. "The proposal to organise society on a communistic plan . . . is one of which the serious interest has now passed away" (Sidgwick, *Pol. Econ.*, III. vii. § 3). But wholly apart from the history of the advocacy of that proposal, there have been innumerable cases where the principles of equal labour and equal distribution have been recognised and acted on (for a considerable list, see Roscher, *Pol. Econ.*, § lxxxi. notes). Religious societies, such as the Essenes, Anabaptists, Dunkers, Moravians or United Brethren, the monastic orders, and the six societies described in Nordhoff's *Communistic Societies of the United States* (1875), have always been prone to adopt a communist organisation, whether from asceticism, or unselfishness, or a desire to minimise communication with the world. Of these bodies the American societies are far the most important from an economic point of view, as their industrial character is not by any means wholly subordinate to their religion. In 1874 they consisted of about seventy communities, with a total population of 5258. The Shakers (58 communities or "families," population 2415, founded in 1792) and the Rappists or Harmonists of Economy (pop. 110, founded 1805) were celibate, the Separatists of Zoar (pop. 300, founded 1842) and the Aurora and Bethel communes (pop. 600, founded 1844) maintained the institutions of marriage and the family, while the Perfectionists of Oneida and Wallingford, followers of Mr. J. H. Noyes (pop. 283, founded 1849), practised an elaborate system of polygamy and polyandry. This was abandoned in 1879, and the society was converted into a joint-stock company in 1880. Most of the communities were well off, and all were able to secure efficient but not exhausting labour from their members. The population in general was declining, chiefly in consequence of the superior attractions presented to the young people, native and adopted, by the more exciting existence of the outside world. All the societies except the Shakers and the Perfectionists had German founders.

Communist elements, the importance of which seems to be growing, are present in the state provision of such things as roads, drains, lamps, parks, schools, and libraries, which are maintained by taxes and rates levied in the main according to the ability of the contributor to pay, and are used in common, or equally, or according to need. The English poor law is communistic as regards the contributions levied under it, but the comparison which used to be frequently made between the workhouse and a communist society is misleading, as the paupers have not the direction of their collective industry, and are not in the least affected by the increase or diminution of its produce.

The criticism of communism by economists begins (not to include Hume's *Essays*, II. p. 270) with Malthus's remarks on the schemes of Owen and SPENCE (*q.v.*) in the 5th edition of his *Essay on Population* (1817). He gives "two decisive arguments against communism: (1) the absence of "those stimulants to exertion which can alone overcome the natural indolence of man"; and (2) the absence of checks to the increase of population which would be brought about by the removal of "the laws of private property and the moral obligation imposed on every man by the commands of God and nature to support his own children" (ii. 276, 277). These two arguments have been very generally repeated by later writers down to the present time (*e.g.* Sidgwick, *Pol. Econ.*, III. vii. § 3), and very little has been added to them. J. S. Mill (*Pol. Econ.*, II. i. § 3) rejected them both, urging that both supervision and individual self-interest in the efficiency of labour would be more complete in a communist society than is at present the case as regards the great mass of labour, and that excessive increase of population would be more likely to be repressed by public opinion in a communist society, where it would cause "immediate and unmistakable inconvenience to every individual in the association." Mill's position as to the stimulus to industry has been strengthened by the support which many economists have given to co-operative production, in which the stimulus is collective and not individual, since each man's labour is supposed to be made more efficient than under the ordinary system by the desire of each that the product of the labour of all may be great. No one need look to political economy to prove or disprove the advantage of communism in the abstract. It is generally recognised that a society is likely to be happier the more equally the produce of its labour is divided (Sidgwick, *Pol. Econ.*, III. vii. § 1; cp. Jevons's *Theory*, ch. iii.), but the remaining economic question, "Can any kind of government organise labour and production so as to supply the wants of society (given the admitted advantage of equality) as well, on the whole, as they can be supplied by the system of private property and competition?" is one as to which opinions may legitimately differ, and to which the true answer is probably different at different times and places.

For the "communists" of Paris in 1871, see COMMUNE OF PARIS. (See also ANARCHISM; BABEUF; BRISSOT DE WARVILLE; CHRISTIAN SOCIALISM; CO-OPERATION; PROPERTY; PROUDHON; SOCIALISM

[A. Sudré, *Histoire du Communisme*, 3me éd. 1850.—B. Malon, *Histoire du Socialisme*, 1883.—E. Fleury, *Babeuf et le Socialisme en* 1796, 2me éd. 1851.—L. von Stein, *Geschichte der Socialen Bewegung im Frankreich*, 1850.—R. Owen, *Life written by Himself*, vol. i. 1857; vol. i. A. (continuation of appendices) 1858.—R. Dale Owen, *Threading my Way*, 1874.—A. J. Booth, *Robert Owen*, 1869.—M. Hennell, *Outline of the various social Systems and Communities which have been founded on the Principle of Co-operation*, 1844.—G. J. Holyoake, *History of Co-operation in England*, vol. i. 1875; vol. ii. 1879.—J. H. Noyes, *History of American Socialisms*, 1870.—A. Shaw, *Icaria*, 1884.—*Encyclopædia Britannica*, 9th ed. Art. "Oneida," by W. A. Hinds (a member of the community), 1884.—Nordhoff, *Communistic Societies of the United States*, 1875.] E. C.

[Among English economic writers J. S. Mill (*Principles of Political Economy*, bk. ii. ch. ii. § 2) makes the characteristic of communism "absolute equality in the distribution of the physical means of life and employment." H. Sidgwick again (*Principles of Political Economy*, bk. iii. ch. vii. § 3) restricts Communism and Socialism to systems which involve either the almost entire abolition of private property, or its restrictions to consumers' wealth.]

COMPAGNONNAGES. These were associations of itinerant workmen in Italy, France, and England, formed with the purpose of providing members with food, lodging, and employment; differing from the craft-guilds in that the latter were local, while the compagnonnage was a widespread organisation with local branches. A house of refuge, presided over by an officer called the "mother" of the lodge, was maintained in every town. Here board and lodging were provided for members of the society. Membership was tested by secret signs and passwords. Such employment as was to be found in the place was distributed to members in rotation, the last comers having a prior claim to those who had already had work in the town. The origin of the compagnonnages is involved in legend, but they appear to have started in Italy, and to have spread thence through France during the 12th century into England. In France they were closely connected with the order of the Knights of the Temple. They were divided into three main branches under the names of "Enfants de Salomon," "Enfants de maître Jacques," and "Enfants du père Soubise." The two former

divisions contained men of various trades, but the last was composed of thatchers and plasterers only. The rivalry which existed between these divisions gave rise to sanguinary conflicts, and the compagnonnages, originally useful in protecting workmen against seignorial oppression, tended to assume the character of secret societies, and to become sources of riot and disorder. They were the object of much repressive legislation from the 16th to the 18th century, and in France were finally abolished in 1791.

[Block, *Dictionnaire général de la Politique*, 1873.—*Dictionnaire de l'Économie Politique*, 1852.—*Nouveau Dictionnaire d'Économie Politique*, 1890.] A. H.

COMPANIES.

Companies, English and Scotch Law, p. 368; Increase of, p. 369; Influence on Business, p. 370; Companies, City of London, p. 371; Companies, Staple, p. 373; Companies, Trading, p. 375 (see Foreign Trade, Regulation of).

Companies. English and Scotch Law. The primary idea of partnership is the association of persons, mutually acquainted, for the purpose of commercial enterprise, that is, to gain something. Mutual acquaintance and mutual choice and confidence result in personal relations between the partners; one can bind his fellows in the way of the partnership business; when one dies or when his circumstances undergo a material change, the remaining partners can withdraw their confidence or resist the introduction of his representatives or assignees whom they may not know, and the continuance of the partnership then becomes impossible. As the outside world looks to the partners themselves, when they are known, or even when only some of them are known, credit is given to them and they are all either directly or ultimately liable to the creditors of the firm. Joint-stock companies as usually formed are built up by stated contributions from those who form them; the element of mutual personal choice disappears; the shares are transferable; the management is carried on by the officials of the company to the exclusion of the individual shareholders as such. The transition from simple partnership to joint-stock companies was hampered in England by the persistent application by the courts, to all forms of association, of those principles which are applicable in fact only to simple partnerships founded on mutual personal choice. In Scotland the transition was at first rendered easy by a different set of principles borrowed from Continental and Roman law. The Scottish common law recognises even in simple partnership a separate quasi-personality, in virtue of which it can sue and be sued by even its own partners, can enter as a partner into other partnerships, and is primarily liable for all the debts of the joint undertaking. Primarily only, however; ultimately the partners are liable for all the debts of the firm. A natural outcome of this doctrine of separate quasi-personality, which was at the beginning of the 18th century more broadly stated as a doctrine of separate personality, was that where a joint-stock company took care not to introduce the names of its partners into its collective name, but used a descriptive name of its own (compare the French *Société anonyme*), the creditors of the concern were held to have given credit not to any individual partners, but to the separate entity which had been created by their joint contributions. Accordingly it was decided in 1727 that the partners of the Arran Fishing Company were not personally liable beyond their shares in the company. Thus the Scottish law was at that early date within easy reach of the principle of joint-stock companies with limited liability.

The Scottish lawyers of the day appear to have considered that to obtain a royal charter was a superfluous though dignified measure; they explain that such a charter needed no legislative sanction, such as is necessary where monopolies are to be conferred, because the powers conferred were already in accord with the common law; there might, however, be an advantage in the explicit limitation of liability which was set forth in the charter. In England the current idea of the time was that limited liability companies were, generally, contrary to public policy; and English ideas began to affect the Scotch legal mind. In Scotch legal procedure it became customary and then necessary to add to the name of a company the names of at least three of its partners as such; confusion was introduced by the Scotch use of the word "company" to mean simple personal partnership as well as joint-stock company. In the leading case (1778) of the banking firm Douglas, Heron, and Co., generally known as the Douglas Bank or the Ayr Bank, it was decided that the liability of the partners was not limited, apparently because of the semi-personal name of the firm; this shook the confidence of Scotch investors in all joint-stock companies; next the Bubble Act, passed in 1719 after the South Sea crash, prohibiting companies from acting as corporate bodies with transferable shares, was unearthed and then believed to apply to Scotland; and the Act 7 Geo. IV. c. 67, empowering private banking companies to sue and be sued in the name of their principal officer on certain conditions, was believed to confirm by implication the view that joint-stock companies were no more than simple partnerships, and that consequently liability could only be limited by special and separate contracts with creditors. But even in Scotland, and even at that time, there was a doubt as to how things stood when the partners of a joint-stock company were known; and in extensive undertakings above the rank of ordinary commercial partnerships a favourite expedient was to obtain a royal

charter which placed the question beyond doubt by the creation of a mercantile corporation. Such a corporation was a distinct individual, with its own estate and liabilities, a corporate name, and its own seal; it could sue and be sued, and was managed by its own officials to the exclusion of the shareholders; it could hold lands without the intervention of trustees; it had perpetual succession and transferable shares, could make bye-laws, and could not be dissolved except by surrendering its charter; and when its property was exhausted, its creditors had no other funds to look to for payment of its liabilities.

Even with regard to chartered companies in Scotland the legislature (6 Geo. IV. c. 91, 1825) empowered the crown to insert in charters a condition of unlimited liability; and in the charters of the National (1825) and Commercial (1831) Banks the liability is stated not to be limited by the charters. An act of 1837 repealed this; and from that date, before which the circumstances in England and in Scotland had, so far as regards the powers of joint-stock companies and the liabilities of their shareholders, become practically the same, a long course of legislation has step by step evolved for the whole United Kingdom the principle of registered joint-stock companies either with or without limited liability (see COMPANIES, INCREASE OF); the governing statute now being the Companies Act 1862, upon which attend a number of supplementary statutes bearing the same name in successive years: the whole now forming a mass of legislation sorely in need of consolidation.

Where a proposed company tends to invade the privileges of the public, legislative sanction is necessary for its formation with the desired powers; for example, companies having monopolies such as the Bank of England and the Bank of Scotland, upon which a monopoly of Scottish banking was conferred for twenty-one years, both of which have charters following upon statutes. Railway companies and others having aggressive powers are formed directly by private acts of parliament; and for companies of this order a considerable measure of uniformity in administration is secured through the operation of the various general Clauses Consolidation Acts of 1845, and amending statutes. A. D.

COMPANIES, INCREASE OF.* The marvellous expansion of joint-stock enterprise during recent years may be clearly seen from the following figures, which show the respective numbers of limited companies registered in each successive year since 1863. They are taken from the last return issued by the Registrar of Joint-Stock Companies, and do not include companies incorporated under special Acts of Parliament—as, for instance, Railway and Canal Companies—but only such companies as were incorporated under the Companies' Acts.

	England.	Scotland.	Ireland.		England.	Scotland.	Ireland.
1863	689	24	20	*1877*	808	83	47
1864	893	17	34	*1878*	726	61	28
1865	902	29	42	*1879*	876	58	34
1866	656	33	37	*1880*	1074	65	31
1867	412	14	14	*1881*	1394	72	29
1868	392	20	13	*1882*	1393	95	38
1869	417	13	11	*1883*	1416	108	106
1870	518	12	15	*1884*	1282	107	54
1871	668	42	31	*1885*	1257	78	52
1872	912	81	27	*1886*	1647	87	51
1873	1061	62	42	*1887*	1808	91	46
1874	1076	63	18	*1888*	2278	120	67
1875	1035	45	24	*1889*	2455	133	70
1876	831	64	29	*1890*	2769	145	91

[See COMPANIES, INCREASE OF, App.]

The figures for 1891 showed a large falling off, which was continued by the effects of the financial difficulties in South America and the Baring crisis; but there can be no doubt that these were merely temporary hindrances, and that a tendency so marked must continue to exist and will even increase in intensity. It cannot be disputed that the expansion of joint-stock enterprise will produce considerable economic changes; these changes depend on certain characteristics of joint-stock as distinguished from private undertakings, the most important of which are the following: (1) A company is an artificial unit created by law, inaccessible to several of the motives and independent of several of the incidents to which a single trader or a private partnership is subject. The failure of a company does not in itself affect the mercantile standing of any person, and there may be therefore more temptation to enter on risky enterprises; on the other hand, the freedom from any ties of personal friendship or moral obligation makes it easier to conduct business on strict rules (*e.g.* in the granting of credits). A private trading concern generally depends on the continuation of one or more lives, and also on the continued wish of a limited number of individuals to carry it on; a company is generally formed for an indefinite time, and has a much greater chance of continued existence. No one would enter into a transaction with a private firm, involving the continuance of its solvency for a long number of years as, for instance, when a life policy is taken out which may not become payable for eighty years or more. (2) The persons engaged in the management of a company are not so directly interested in its success as the partners of a private firm. It may happen, and has happened, that directors or managers have actually had interests hostile to the company over which they were placed, through being more largely benefited by the success of competing undertakings, or through having sold shares in the hope of repurchasing them at a cheaper price. They may also for various

reasons be desirous of creating a momentary advance in the price of the shares, and with that view enter into transactions showing large profits on paper, but seriously compromising the continued prosperity of the undertaking. (3) Joint-stock enterprise favours the creation of businesses carried on on a large scale, and renders the existence of smaller establishments more difficult. (4) The greater publicity of business transactions and of their results is another of the leading characteristics of joint-stock companies.

The expansion of joint-stock enterprise, and the gradual absorption of private trading concerns, will probably produce the following results: (1) The profits of private traders will be diminished—because the expenses of management must necessarily be much smaller in proportion in the larger establishments, the existence of which will be facilitated by joint-stock enterprise, than in the smaller undertakings carried on by individuals, and because the former class will therefore be able to outbid the latter class until their own level of minimum profits has been reached. (2) Numerous opportunities will be created for employment with a fixed income. The small tradesman who now has some chance of acquiring wealth, but who runs a constant risk of being deserted by his customers, will become a clerk in a large establishment and thus acquire a more modest, but much less precarious source of income. (3) The man of real talent will have a better opportunity of acquiring a proper position, because he will not disappear in the crowd, but rise from step to step in the establishment in which he works. (4) The expansion of joint-stock enterprise will facilitate the introduction of improvements and inventions, as the probability of the presence of inventive persons is much greater in large than in small establishments, and as large establishments are in a better position to try experiments which may prove costly and unsuccessful. (5) As regards the relations between employers and workmen, the further development of joint-stock enterprise will probably prove beneficial. The decrease in the number and the increase in the size of industrial establishments will facilitate combinations between employers as well as between workmen; but this fact will also facilitate negotiations, and the contest will lose much of its bitterness when the workmen are no longer opposed to private individuals whose wealth and manner of living is conspicuously before their eyes, but on receiving their wages from impersonal companies, the profits of which are ascertainable by everybody. The publicity of profits will also facilitate profit-sharing arrangements.

It will thus be seen that the gradual substitution of joint-stock in the place of private enterprise will in all probability lead to a general levelling of profits and incomes, and will at the same time in many ways facilitate the general production of wealth; but some of the above mentioned facts will, on the other hand, tend to increase the motives and opportunities for unsound trading. It is clearly within the province of legislation to counteract these motives and opportunities, but it is difficult to devise efficient means for that purpose. It has been proposed to introduce a system of registration requiring—in imitation of the provisions on that subject which are in force in some continental countries—an investigation of the circumstances attending the formation of a company and the subscription of a certain part of its capital, previously to the issue of the final certificate of incorporation; and the existing law has some stringent provisions with regard to the liabilities of the promoters and directors of companies for statements or omissions in prospectuses; but the object of provisions of that sort is more the protection of investors than the prevention of unsound trading; they may, in fact, even increase unsound trading by preventing prudent and solvent persons from joining the boards of new companies. Unsound trading—that is, trading without a chance of profit, or with overwhelming chances of loss—cannot be entirely prevented, but the legislature might, by insuring its detection, or by removing its inducements, succeed in restricting it as much as possible. Compulsory yearly balance sheets, and a compulsory yearly valuation of the assets by independent professional auditors would do much in that direction. A more active participation of the shareholders in the meetings of the company would also act as an efficient check on directors and managers; but legislation is powerless in that respect. If the principle of reserve liability (the liability to pay an additional amount on each share in the case of a winding up) was made compulsory generally, shareholders would possibly become more watchful; and, as in any case stock exchange gambling in the shares of companies would become impossible if such a measure were adopted, as it would take away the possibility of obtaining loans on the shares, one of the chief motives of unsound management would in this way be removed. There are many other means by which the dangers pointed out above may be counteracted in a certain measure, and the attention of legislators may be usefully directed to a subject the importance of which will, if the present tendency continues, become more conspicuous every year. E. S.

COMPANIES. Their Influence on Business. In the marvellous industrial development distinguishing modern times, joint-stock companies have played a most important part. Their influence is not to be measured merely by

the magnitude of the capital that has been embarked in them, enormous although that has been. As to the amount of that capital, unfortunately no exact statistics are available. From parliamentary returns it appears that from the commencement of the Companies Act, 1862, to the 31st December 1890, there had been registered in the United Kingdom, companies with an aggregate nominal share capital of about £3,970,000,000. Of these companies, however, a multitude never got beyond the registration stage, which is only the preliminary to an appeal to the public for capital. Others again, which it was attempted to float, failed to meet with support; while many that were constituted had to be content with a smaller capital than was at first intended. Besides, in the great majority of cases the nominal capital is greatly in excess of the paid-up or working capital. The amount of proposed capital thus affords no guide to the amount of capital actually invested and used in business. According, however, to the calculations of the registrar of joint-stock companies, the paid-up share capital of the registered joint-stock companies of the United Kingdom carrying on business on the 30th of April last was £775,000,000; if to that be added the capital raised by debentures, mortgages, etc., it is probably not over the mark to estimate that the capital embarked by our joint-stock companies thus exceeded £1,000,000,000. But, as has been said, it is not so much the magnitude of the capital of the joint-stock companies as the way in which it has been employed that has influenced business. Joint-stock capital is essentially more venturesome than that of individual traders. The limitation of liability has enabled risks to be run and experiments to be made which would never have been ventured upon had it been necessary for those by whom they were undertaken to stake their whole fortune upon the result. Hence it is that the companies have to a large extent acted as the pioneers and promoters of private enterprise. They have exploited all manner of new inventions, that otherwise might have fallen still-born, they have opened up new territories, have developed transit facilities all over the world, and girded the earth with the meshes of the electric telegraph. Thus they have not only opened up new fields for trade, they have also afforded the physical means by which these may be exploited; and further to some extent, by means of banks, finance houses, and similar institutions, provided traders with the requisite capital. In these ways they have given an impulse to business far beyond the extent of their own operations. To them also another feature of recent times, the now decided tendency to a lower level of the prices of commodities in general, is in no small measure due. Supplies of commodities have been increased by the enlargement of the area of production; cost of transit has been reduced: and, by steam and telegraph, markets have been brought into such close contact that the former need for large stocks of goods has been reduced to a minimum. Further, a lower standard of profits has been established. Shareholders whose surplus capital is invested in an undertaking are naturally content with a smaller return than the individual trader who derives his whole income from a similar business; while the publication of their accounts by trading companies, and the great mobility of capital under the joint-stock system, ensure that whenever on any business a high rate of profit is being earned new capital will flow into it, and, by creating keener competition cause profits to be curtailed. The flow of money into business too has been made somewhat more direct. In the collection and distribution of the surplus capital of the country the banks do not play quite so great a part as they previously did. Some portion of what would formerly have been deposited with them, and by them lent out to traders, now goes direct into the hands of the companies, and this no doubt is one amongst other causes that have in recent years led to a continuous decrease in the amount of bills negotiated, notwithstanding the enormous increase in the volume of business. Such are some of the influences which joint-stock companies have exercised upon business. That their influence has not been altogether for good is notorious. Through them hundreds of millions have been wasted on chimerical enterprises, or gone into the pockets of fraudulent promoters; and shareholders have suffered grievously through the ineptitude or extravagance of the management. The question of comparative losses and gains, however, lies beyond the scope of these remarks.

[Compare Adam Smith, *Wealth of Nations*, bk. v. ch. i.—J. S. Mill, *Pol. Econ.*, bk. i. ch. ix. §§ 1, 2.] E. J.

COMPANIES (City of London). The city companies formerly constituted the administrative machinery by means of which the municipality of London exercised a minute supervision over trade and manufacture; while, on the other hand, freedom of one of the companies was a necessary qualification for the civic franchise. Though their trade functions have with very few exceptions (vide *infra*) long since become obsolete, they still form an integral part of the London municipality, and they administer great revenues. The companies, therefore, are the most important survival of the industrial and municipal system of the Middle Ages. It has been argued that some of the guilds, which became later the chartered companies, must have existed in Anglo-Saxon times, but there is no documentary evidence in support of this contention. The Pepperers, the Goldsmiths, and others, were amongst the adulterine

guilds amerced in the reign of Henry II., and the Guildhall is mentioned *circa* 1212. During the 13th century the influence of the city guilds increased, and gradually freedom of a guild and the civic franchise became practically convertible terms. Edward III. incorporated many of the trading fraternities, and himself became a member of the Linen-Armourers. In 1377 there were no less than forty-eight of these fraternities. In the same year the right of election of the city officers was transferred from the wards to the companies, but this arrangement led to tumults and discontent amongst the citizens, and "the approved and established practice of ancient and praiseworthy usage" was restored (*Liber Albus*, 37). The Grocers, originally founded by twenty-two pepperers of Soper Lane (now Queen Street), were apparently the most powerful of the companies at this time. There were complaints of their monopolising tendencies in 1363, but in 1385 and the two following years they were able to return Sir Nicholas Brembre to the mayoralty "be strong hand of certayne craftes" (Heath, *Account of the Grocers*, 443; Aungier, *Croniques de London*, xvii.; *Rot. Parl.*, II. 278; Herbert, *Livery Companies*, i., 38). The companies' charters were inquired into by the commission of Richard II. (1389), but they were confirmed and extended in subsequent reigns. It is evident that in the 16th century trade and industry had outgrown the regulations of the Middle Ages, and the exclusive privileges of the companies demanded some relaxation. But new companies continued to be incorporated till the reign of Charles II. At the Reformation their trust estates, which were charged with the support of chantries, obits, and lamps, were vested in the Crown (37 Henry VIII. c. 4; 1 Edward VI. c. 14, § 6). They were afterwards allowed to purchase these confiscated lands in the reigns of Edward VI. and James I. The terms of the grants then made have since been held by the court of Chancery to have vested in the companies the same absolute property in these lands which the act of Edward VI. vested in the crown. "They have thus been, since the Reformation, in the eye of the law, the corporate property of the companies, free from any trust. But these crown grants may be reasonably taken to have been made in the expectation that the income would continue to be in great part applied to charitable uses" (*Liv. Comp. Com.*, i. 40, and *infra*).

The seizure of the chauntry estates was followed by a statute (2 & 3 Edward VI.) which licensed all manner of workmen connected with the building of houses, etc., to exercise their occupations in cities and towns corporate, though they were not free of the corporations. This act was afterwards repealed, and the position of the companies was strengthened by subsequent legislation (*v.* Apprenticeship, Statute of). The charters of James I. constituted "courts of assistants," the first legal appointment of which was made by Mary on the formation of the Stationers' Company (Herbert, *Liv. Comp.*, i. 118), for the government of the companies. The system of forced loans from the companies, which was extensively practised by Henry VIII., was continued in the following reigns by *precepts* from the lord mayor, and during the civil wars there were periodical payments of large sums of money. In 1652, a committee was appointed to ascertain the validity of the charters of different existing corporations, when the Grocers' charter was called for. But Cromwell granted them a new charter, enabling them to make bye-laws for their own government, and conferring on them the power of levying a fine of £30 on each member at his admission. At the Great Fire (1666) many of the companies' halls were destroyed, and important documents and deeds were burnt. When Charles II. made himself Master of the Corporations in 1684 by action of *quo warranto*, the companies surrendered their charters, but they were restored at the Revolution (1688).

The city companies were several times in the 19th century made the subject of public inquiry (*v.* Municipal Corporations Commission, 1833; Charity Commissioners' Reports; Educational Endowments Committee of the London School Board, 1876-79; Livery Companies Commission, 1880-84), and their present position may be thus briefly summarised. The extensive powers which they formerly enjoyed, in the control of the London trades, have long since been repealed by statute or fallen into disuse. But some of the companies still enjoy exclusive trade privileges (*v.* Apothecaries' Act, 1815; Apothecaries' Act Amendment Act 1874, 41 Geo. III. c. 69, § 13; and the Copyright Act, 1842). There are at present twelve "great companies" and sixty minor companies. The civic precedence of the former, —mercers, grocers, drapers, fishmongers, goldsmiths, skinners, merchant taylors, haberdashers, salters, ironmongers, vintners, and clothworkers, dates from the reign of Edward III., and Sir R. Wilmot (1742) was the first lord mayor who did not belong to one of the twelve great companies. *Membership* was probably never confined to the craft or the trade which the company represented. It is obtained by apprenticeship, real or colourable, patrimony, redemption, or election *honoris causâ*. Though there are now few freewomen of the companies, *sisters* were formerly admitted on the same terms as men, and attended the banquets and entertainments. There are three grades of membership: the court, or governing body, self-elective; the "livery," limited in

numbers; and the simple freemen. The courts, consisting of the master, wardens, and assistants, have the entire control of the companies' affairs, the appointment of the staff, the management of corporate property, the administration of charitable trusts, the admission to freedom, livery, and court, etc. Members of the companies are entitled, in case of poverty, to admission to almshouses, pensions, or other charitable reliefs. Till 1835 the freedom of the city could be obtained only through a livery company, but in that year the municipality decided to confer it irrespective of the companies on certain terms through the city chamberlain. But the "common hall," in conjunction with the court of aldermen, still chooses the lord mayor. The companies' estates lie in the city of London, in various parts of England, and in Ulster, where they were compelled to purchase and colonise certain lands in 1609. The capital value of their property was estimated at not less than £15,000,000, and the total income thence arising, in 1879 or 1880, at from £750,000 to £800,000. The accuracy, however, of these figures was disputed. Their income falls into two divisions: (1) *Corporate Income, i.e.* income which is at the absolute disposal of the companies, estimated at £550,000 to £600,000 per annum (1879 or 1880); and (2) *Trust Income, i.e.* income which the companies or their courts are bound to apply in accordance with (*a*) the wills of founders, (*b*) acts of parliament, (*c*) the decrees of the Court of Chancery, and (*d*) schemes framed by the charity commissioners, and by the commissioners of endowed schools. The companies' corporate income is expended in maintenance, entertainments, and benevolent objects: such as the relief of poor members; education, exhibitions at Oxford and Cambridge, University and King's Colleges, London, the companies' schools, the London school board, Girton and Newnham Colleges, etc.; technical education, the Yorkshire College, Leeds, the technical schools at Huddersfield, Bradford, etc, in connection with the City and Guilds of London Institute, the Technical College in Finsbury, and the Central Institution in South Kensington; and in the support of some of the London hospitals. The Companies' trust income is expended in the relief of poor members, almshouses, etc., education, and on charitable objects of a general kind. It appeared (1884) that about half of the total income of the companies was devoted, either under the terms of benefactions or voluntarily, to public or benevolent objects. But "the majority of the commissioners were of opinion that the law of trusts in its application to the increment of the companies' city house-property had promoted the increase of the companies' corporate estate at the expense of their trust estate" (*Liv. Comp. Com.*, i. 42). The commissioners proposed various measures of reform, the most important of which were the restraint of alienation, by the application to the companies of § 94 of the Municipal Corporations Act, 1835 (5 & 6 Will. IV. c. 76), the publication of accounts, and the appointment of a commission to undertake (i) the allocation of a portion of the corporate incomes of the companies to objects of acknowledged public utility; (ii) the better application of the trust incomes of the companies; and (iii), should it prove practicable, the reorganisation of the companies. It may be pointed out that the companies were formerly bound to contribute to various public works. Amongst these may be mentioned the employment of the poor, military and naval armaments, the provision of coal and corn, and the protection of the city.

[The materials for the history of the city companies are extensive; see especially Riley, *Munimenta Gildhallæ Londoniensis.* — Riley, *Memorials.*—*Croniques de London*, ed. Aungier (Camd. Soc.)—*Liber de Antiquis Legibus* (ed. Stapleton (Camd. Soc.) — Herbert, *Hist. of the Twelve Great Livery Companies.*—Heath, *Account of the Grocers.* — Norton, *Commentaries on the Hist. of Lond.*—C. M. Clode, *Memorials of the Merchant Taylors*, 1875. — Gross, *Gild Merchant.*—Cunningham, *Growth of English Industry and Commerce.* — Loftie, *Hist. of Lond.* — *Rot. Parl.*, *Municipal Corporations Commission* (1835-37).—*Livery Companies Commission* (1884).]

W. A. S. H.

COMPANIES, STAPLE. It is by no means difficult to understand the cause which led merchants trading independently to form themselves into companies for certain purposes. The dangers of travel, the difficulties arising in the places where they desired to trade, made combination almost a matter of necessity. To satisfy those needs leagues such as the HANSEATIC LEAGUE (*q.v.*) were formed; but when formed, other reasons led to the introduction of an organisation much closer and more complete than was necessary for the two foregoing ends. In the first place, combinations were more natural to the time than competition, and, as in the case of industry the GILD (*q.v.*), so in the case of commerce, the company, became the central feature. Further than this, the formation of the company, following closely one of the primary causes of the guild, was answerable for its members. The sovereign made certain concessions to foreign merchants trading in his country, and they combined to accept these concessions and to regulate their conduct and their members by them. Of such organisations the institutions of the Hanse furnish many examples, the STEELYARD (*q.v.*) in London being one of the most prominent among them. But in the case of our own country, not only did the king order the comings and goings of the merchant strangers,

as to his own dominions, but it was only by his permission and under his direction that the English merchant could trade abroad with any certain hope of government support should he suffer wrong from foreign powers. In this connection it is that we are forced to consider the institution of the *Staple*. Individuals had traded and formed bands for the occasion, but the organisation of the staple first secured to the English trader a firm and steady footing.

The Staple was an organisation whereby all or the chief articles of export were ordered to be sent for foreign sale to certain fixed places on the continent (Schanz, vol. i. p. 329). Different staple towns might be assigned for the sale of different commodities. There is a variety of testimony as to the first introduction of this system ; it is traced back by some to 1248, but while there is no certain authority for assigning it to so early a date, there is no doubt that the system of the staple was fully recognised in the reign of Edward I. In the reign of Edward III. it becomes of the highest political importance. To a large extent indeed it must be viewed as a political institution. It was introduced by the government and used by it for certain ends of its own. In the first place the institution of the staple in any town was a bribe to the sovereign within whose domains that town lay. In the second place, it provided an easy means for the collection of the export duties levied on commodities sent out of the kingdom. It may well be asked how far it aided English trade. Foreign traders indeed were permitted to enter into the staple organisation on equal terms with English. But though this was the case, the exceptional rights of jurisdiction and privileges granted to the company of the staple encouraged the English exporter to send his commodities abroad now that that could be done with every security and under favourable conditions. It may have assisted the development of trade among foreigners, but it certainly increased the traffic of the English on the continent. Each concession promised to the English king by foreign princes to induce him to establish the staple within their particular boundaries meant a corresponding advantage to the traders who were included in the staple, and most of these were English. The organisation of the staple was effective. The merchants of the staple elected their mayor, who exercised great power. He dealt speedy justice according to the LAW MERCHANT (*q.v.*) ; he regulated prices ; and it was his function to arrange the various dues which had to be paid, and to see that there was necessary accommodation provided for storing goods, etc.

But while the staple was the institution on the maintenance of which the well-being of the English trade of the 13th and 14th centuries chiefly depended, the commercial necessities of later years brought into prominence traders whose main purpose it was to exercise their functions outside the staple towns. The staple had been useful, but it neither directly supported the interests of the English trader as distinct from the foreigner nor did it provide means whereby the trade might be extended into new countries. This was the work of other and chiefly of one other organisation. Already in the 14th century there were separate bands of merchants trading outside the staple. These were the merchant venturers of different cities. But though they were termed companies of merchant venturers, it must not be supposed that they were in any kind of partnership, or that the bond existing between them was of any very stringent nature. There were companies of merchant venturers in York, Newcastle, Bristol, etc., and they were engaged in the most different directions. Some were adventurers to Iceland, some to Prussia, others into the southern countries. But the importance of these various bodies trading to various parts was thrown into the shade by the pre-eminence accorded to those engaged in the trade between England and the Netherlands. It was to them that the name of merchant adventurer particularly attaches (*v.* ADVENTURERS, MERCHANT). There is considerable doubt as to their origin. Most probably their history may be traced back (Wheeler, *Treatise of Commerce*) to the grant of privileges made by the Duke of Brabant to the English merchants trading in his domain. Thereby they became entitled to appear on equal terms before the tribunals of the land in the case of quarrel with natives, while special rights of jurisdiction were granted to them for settling disputes among themselves. This particular jurisdiction, according to Schanz, was the bond of union ultimately developed. It is probable also that prominent among the English traders was the brotherhood of St. Thomas of Canterbury, and that grants made in common to the English were appropriated gradually by this society. But as yet there was no sign of any close union.

At this time the connection of the merchant venturers in Flanders and the Netherlands with the organisation of the staple was very close indeed—so close that the mayor of the staple exercised a supervision over the traders in towns other than the staple. But when the staple was fixed at Calais, and when the cloth trade with Antwerp grew into sudden importance, as in the beginning of the 15th century, such relations were impossible. In 1407 the right was granted to the traders in the Netherlands to assemble and elect a governor who might regulate such matters as were common to them all. This was the second stage in the history of the merchant adventurers. The first marked their origin, the second their separation from the staple. But of any formal incorporation there was no mention. That such was as yet the case is contradicted, Schanz thinks, by the fact that

the various members belonged in England to various companies. But this continued in after times, when the merchant adventurers had long won the grants they sought. The third period in their history was under the Tudors.

Henry VII. was well aware of the importance of trade between the Netherlands and England. The conduct of that trade was chiefly in the hands of the London merchants, who did all they could to exclude others from participating with them in its benefits. This they hoped to effect by demanding from each newcomer a certain and not insignificant sum to pay for the costs of the governors or consuls, and to serve as insurance or surety money. That such an attempt could be made marks, of course, the growth which had taken place in the corporate direction. Hitherto nothing had been done to recognise the legality of such growth, but it was recognised at length when Henry VII., to set at rest all doubt and to prevent all extortion, decreed that every merchant should be free to trade to the Netherlands undisturbed on payment of a certain sum, much less than that which had been demanded, to the body of the merchant adventurers. From this moment their energies, both in the cause of trade and of monopoly, were redoubled. On the whole they met with support from Henry VII. and Henry VIII., who could not fail to understand their importance. In their great struggle with the staplers, though no definite grant gave victory to either side, they were enabled to snatch the substantial fruits of victory by gradual encroachment. As a matter of fact the organisation of the staple had become antiquated. The new trade was not such that it could be directed in regular channels and restricted to particular places; thus, when the staple lost its rights over the country beyond the towns of the staple, assert them though it might within these towns, it had lost far more than it retained. The traders of the staple had to pay their dues to the merchant adventurers when they traded outside the particular towns assigned to them.

The encouragement given to the younger corporation was wise; by it trade was taken out of the hands of the foreigners and placed in those of the English. Thus, indeed, it is that the policy of this society was a part of that great policy of adventure which marked the end of the 15th and the whole of the 16th century. And as the organisation of the merchant adventurers grew more rigid it lost its mobility, and in its turn it had to see much trade fall into the hands of new companies. The company of the merchant adventurers consisted of traders engaged in individual enterprises but united for purposes of jurisdiction and having rights of monopoly. But now new countries were about to be opened up, and new bands of traders appear, having common interest in the ventures they were undertaking. They grew into importance during the reign of Elizabeth, from whom, by the wise advice of Lord Burghley, they met with support. The queen and her minister themselves were often sharers in the ventures. There was something else done for them besides this. The originators of the expeditions, and thus the principal venturers therein, in return for their toil and their risk were granted rights of monopolising the trade in the region to which they were setting sail. They did not form company partnerships in the ordinary sense of the words, they had monopoly rights, and each expedition was separate and distinct in which the original grantees and their friends made venture; but gradually these expeditions became regular, and in like manner it would appear the amount of each man's venture became fixed by custom. This process may be traced in the history of the East India Company (*q.v.*), founded 1599, in its development from the Levant Company (*q.v.*), founded 1592. Among other companies may be mentioned, Company of Merchants trading to Spain, Russia Company, African Companies, Eastland Company, Company of Cathay, Turkey Company, Hamburg Company.

In due time the policy of granting monopolies both to these companies as also to the merchant adventurers became a matter of much debate (*v.* pamphlets by Lewis, Roberts, Brent, and Parker), and in 1672 the rights granted and hitherto continued were curtailed by act of parliament (14 C. II. c. 7).

[Schanz, *Englische Handelspolitik.*—Ochenkowski, *Engl. wirthsch. Entwickelung.*—Wheeler, *Treatise of Commerce.*—Pamphlets by Misselden and Malynes. There is a spirited but insufficient description of the growth and importance of these companies, both Staple and Merchant Adventurers, in Richard Jones's works, edited by Whewell.]

E. C. K. G.

COMPANIES, TRADING. See Foreign Trade, Regulation of.

COMPENSATION. 1. *For land taken compulsorily.*—When land is taken compulsorily, generally for public undertakings, no compensation is payable either for the taking or for injury done to land injuriously affected unless special provision therefor is made in the statute which authorises the taking. This provision is almost always made by applying the terms of the Lands Clauses Act of 1845, c. 18, to the particular case, but it was decided in the famous case of the A.G. *v.* De Keyser's Royal Hotel (1920), A.C. 508, that the Crown is not entitled as of right to take possession of the land or houses of a subject for administrative purposes connected with the defence of the realm without paying compensation. Ten per cent is usually added as additional compensation, but in some acts, such as the Artisans'

and Labourers' Dwellings Improvement Acts, this is forbidden; while under the Housing of the Working Classes Act, 1900, c. 70, no compensation is due for loss of trade or goodwill (Harvey and the L.C.C. (1909), 1 Chancery 528).

When none of the claimant's land is taken, but his own land has been injuriously affected by the taking of other land, he has under the Lands Clauses Act a right to compensation.

Under the Railways Clauses Consolidation Act, 1845, c. 20, extended in this relation by the Public Health Act, 1875, c. 55, amended by the Local Government Act, 1894, c. 73, promoters are not entitled to buy minerals, but if the mineral owners intend to work them, the undertakers then have the right to buy.

2. *For Tenants' Improvement.* At common law a landlord was not bound on the termination of a tenancy to compensate a tenant for improvements, except in particular localities as dictated by "customs of the country." In 1875 an act (38 & 39 Vict. c. 92) was passed with the object of introducing a general law of compensation for England and Wales, but its permissive character rendered the act largely inoperative. In 1883 a new act (46 & 47 Vict. c. 62) was passed, under which an outgoing tenant can claim compensation equivalent to the value to an incoming tenant of a large number of named permanent and temporary improvements. Several amplifying acts were subsequently passed, including the important Agricultural Holdings Act of 1908, c. 28; but this with other acts and parts of acts dealing with compensation were repealed and consolidated by the Agricultural Holdings Act, 1923, c. 9. In general terms it may be said that in tenancies under contracts made on or after 1 January 1921 an outgoing tenant is entitled to compensation, (*a*) for improvements of a permanent nature to which the landlord has given his written consent previous to the execution of the improvement (Sch. 1, pt. i.); (*b*) drainage, after written notice to the landlord from two to three months before commencing to execute it—this to give the landlord opportunity to do the work himself, charging the tenant interest at 3 per cent (Sch. 1, pt. ii.); (*c*) improvements for which no notice to the landlord is required, chiefly of a manural nature, laying down grass and fodder crops, and building repairs which the tenant is not bound to execute himself, and which the landlord has neglected to carry out after being particularly notified (Sch. 1, pt. iii.). Tenants under agreements made before 1 January 1921 and which secure them fair and reasonable compensation for these (*c*) improvements are bound by the terms of their agreements in this relation (§ 4). The amount of compensation is the value of the improvements to an incoming tenant as determined by arbitration. Compensation is also due for increased or diminished value of the holding according to a record made under § 32 (§ 9), for damage by deer and winged game over one shilling per acre damaged (§ 11), for unreasonable disturbance by notice to quit, as set out in § 12, including compensation to an employé-cottager disturbed by the same notice under certain circumstances (§ 14), and compensation when possession is taken by mortgagees, when these are not bound by the lease (§ 15). The landlord may obtain a charging order by the Minister of Agriculture for the expenses of drainage.

3. *Land Nationalisation.* This is now but part of the idea of nationalisation of property and industries, on which it is generally agreed that compensation would be payable.

W. A. B.

COMPETITION AND CUSTOM. Wealth having been produced, is forthwith—or even in the act of production—distributed amongst those who have been concerned in its production, and the share of the product which falls to the lot of each of these is determined in the absence of disturbing causes by competition. Competition has been defined as the free action of individual self-interest — that is to say, supposing a given amount of wealth to be divided amongst four persons, the proportion of it which each gets will depend on the extent to which he is superior to the others in the qualities necessary to the struggle, the strongest for this purpose getting most and the weakest least. But competition is more clearly seen in its results. 1. Granting that every man seeks to increase his pleasures and reduce his pains, *i.e.* to secure an increase of pleasure for a given amount of exertion, or a given amount of pleasure for a smaller amount of exertion, we see that every man will set himself to procure the necessaries and comforts of life at a minimum of sacrifice; no one will work harder for a given result than he need. The same holds good when division of labour and exchange appear. Every man will now strive to exchange the products of his labour for as much as possible of the products of the labour of others, for by so doing he will increase the amount of necessaries and comforts which his labour commands. When this process has become general the result will be that similar exchanges will take place on similar terms. This is commonly expressed by saying that there can only be one price at one time for the same unit of the same quality of the same article in the same market (see MARKET). Thus a quartern loaf of household bread may be assumed to be at the same price on the same day all over Oxford, but may be at a different price in Bristol, Norwich, and Durham; a quarter of wheat of the same quality to sell for the same sum all over England; an ounce of silver all over the civilised world. These are the results of "commercial" competition.

2. Granting that all are striving for a maximum return to their exertions, producers will betake themselves to those forms of production which offer such a return, whether immediately or by means of exchange. Labourers will go where wages are highest; manufacturers will embark in those industries which give the largest profits; capitalists will lend their savings to those who can be trusted to pay the highest interest. But in time all these inequalities will vanish. If occupation A, for example, is crowded because of the high return which exertion commands in it, occupation B will be comparatively deserted, with the result that the products of B will rise in value as compared with those of A, and the rewards of those engaged will rise and fall proportionately. Ultimately an equality will be arrived at—that is to say, that whether by wages, profits, or interest, equal efforts and sacrifices will secure an equal real reward, however dissimilar the services by which they are represented, or the money-payment in which their reward is given. This is popularly expressed by saying that "in the long run wages and profits tend to an equality," and is the result of "industrial" competition.

Thus far the working and results of competition have been described in an "economic" world, among a people, that is, who were actuated by economic motives and no other. It is commonly brought into relation with the facts of life by saying that it is a "tendency." This may mean one of two things—(1) In the economic world, as we see, competition is complete and its results are patent. The possibility, the vision, of a greater reward for his exertions will make a man shift his wares from one market to another, and the same prospect will lead him to shift himself and his capital from one undertaking or calling to another so soon as may be; with him no other motive can or does interfere. Competition in actual life is a tendency in so far as men in the absence of any counterbalancing motive are swayed by self-interest. The expression does not imply that self-interest is more than one motive out of many, but it is the motive to which alone economists attend. (2) It is sometimes assumed that competition is a tendency in the sense that it is a force of gradually increasing strength in determining distribution. How far competition is a tendency in this latter sense is a matter of considerable dispute. It would be quite impossible to discuss the relative strength at any moment of the various motives which influence human action, as, *e.g.* to show the comparative force of patriotism and self-interest in the average man in two successive generations. But taking the material world and the distribution of wealth in it, we may have definite forces at work which are, so to say, rivals of competition in this field.

1. Early in the 19th century it was taken for granted that the only serious hindrance in the way of perfect competition was custom. Custom, *i.e.* the doing a thing because others have done it, has at all times been a powerful influence in the world. It is seen in both the spheres of competition. Custom may fix prices year after year; custom determines a man's walk in life, the employment of labour and capital, often to the exclusion of any other motive. "Heralds in Sparta," says Herodotus (vi. 60), "are not so made on account of any special clearness of voice, but son succeeds father." The younger sons of the peasant owner in Auvergne leave their native mountains to work in Paris and elsewhere, not because wages are higher, but because it is the tradition to do so in order to avoid breaking up the family estate. It may be strongly argued that custom is losing strength. It is still powerful in the East, more powerful in Asia than in Europe, in Europe than in America; it was stronger and extended over a wider area a century ago than now; the professions, etc. in which it still lingers among ourselves are gradually shaking it off; its disappearance as a factor in exchange would be an additional illustration of the transition from status to contract, which is said to characterise the modern as distinguished from the ancient or mediæval world.

2. Combination is commonly said to be an obstacle or interruption to competition, and if competition be defined as the action of individual self-interest, it is, at first sight, inconsistent with combination. Thus, *e.g.* if competition in the above sense is thorough-going, every workman will make his own terms with his master, will compete against his fellow-workmen for employment, will stand or fall by his own individual strength. The labour market will exhibit the spectacle of a threefold struggle, viz. of master against master for workmen, of workman against workman for employment, and of master against workman to settle the rate of wages. Remove either of these by combination of workmen in trades-unions or of masters in associations, and competition is *pro tanto* diminished. So, too, in exchange; here it is the struggle to sell and the struggle to buy, and the struggle between buyers and sellers which settles the price. A combination of buyers or sellers, a "ring" of any kind, diminishes the competition. In Michigan, *e.g.* the sellers of salt, by an agreement to sell through a joint agent only and at uniform rates, put an end to all competition amongst themselves. On the other hand it may be urged (*a*) that although in both of these cases competition is in one direction weakened, in another it is strengthened. The competition among sellers in the labour or the salt market is suspended only to increase their strength in competing with buyers, to enable their self-interest to act with greater force; the struggle is more severe as being between organised

bodies rather than between isolated individuals; (*b*) that all combination is really in the end dictated by self-interest, and that no one who joins a combination does so with the idea that his own interest will suffer, but rather that the interests of the individuals are bound up with the interest of the body to which they belong.

3. A third rival of competition is socialism. In competition, as we have seen, every man is left to secure for himself what he can of the wealth which he has helped to produce. Socialism would substitute for this "scramble" an orderly distribution by the state. So far as we are concerned with it here, socialism would not directly affect production, but taking wealth when produced, the state would distribute it by some one of its organs. The principle of distribution is immaterial to our subject; whether the state proceed on some real or supposed ground of equity, distribute according to deserts or according to needs, it will equally put an end to competition.

For Adam Smith the end of the statesman is to secure that all distribution proceeds on competitive principles; the removal of all hindrances and obstacles to the free play of individual self-interest is the general lesson of the *Wealth of Nations;* whilst at the same time the writer shows that the results of competition are but seldom seen in their fulness. For Ricardo competition is a postulate; his conclusions uniformly depend on the assumption that all men know and seek their own interest without let or hindrance. Mill assumes competition in part, and in part treats it as a growing force; much of his reasoning, like that of Ricardo, starts from the hypothesis that competition is universal; much again of his treatise is devoted to showing its limitations in practice. Cairnes has pointed out that these limitations are far more effective than was supposed in his theory of mutually exclusive, or, as he calls them, "non-competing," groups of producers, but his conclusions have perhaps no claim to finality. Cliffe Leslie again showed, by some remarkable instances, *first*, how much more lasting is custom than was once thought, and how much a man's actions are determined by his surroundings, rather than by simple motives such as self-interest; and *secondly*, that the areas over which anything like equality in prices can be traced are very small, and that so far the tendency has been for fresh inequalities to arise as fast as the old are obliterated.

[See Adam Smith, *Wealth of Nations*, bk. i. ch. x.; pt. ii. bk. iv. ch. i.-viii.—Mill, *Principles of Political Economy*, bk. ii. ch. iv.—Cairnes, *Some Leading Principles of Political Economy newly Expounded.*—Cliffe Leslie, *Essays in Political and Moral Philosophy*, xv. xvii. xxi.—Sidgwick, *The Principles of Political Economy*, Introd. i. iii.—F. Walker, *Political Economy*, bk. iii. ch. i.] L. R. P.

COMPETITION AND REGULATION. Where one man vies with another for the advantage of dealing with a third party, there is competition. Simple examples are: the public at an auction bidding against each other; a shopkeeper lowering his prices to attract custom. The action of a competitor is less simple when, changing his occupation, he enters the trade of those with whom he competes. "The operation of competition . . . by which the terms of *similar* exchanges are kept approximately similar should be carefully distinguished from that other action of competition by which certain inequalities in the remuneration of *dissimilar* services tend to be continually removed" (Sidgwick's *Political Economy*, Introd. ch. iii. § 3). These varieties of competition are distinguished by Cairnes as "commercial" and "industrial" competition (*Leading Principles*, part i. ch. iii.) The simpler process may be illustrated by the action of physical forces tending to equilibrium. Jevons compares the equations of "final utility" which determine market prices to the differential equations which determine the equilibrium of a mechanical system (*Theory of Political Economy*, ch. iv.) The analogies of exact science, the formulæ of Jevons and Walras, are less helpful when we regard competitors as balancing the *total utilities* of different occupations. The equation of "net advantages," to use Prof. Marshall's phrase (see *Principles of Economics*) in different trades is not very analogous to any theorem in mathematical physics.

Competition is contrasted with monopoly and combination; with governmental regulation, charity, and custom. The preferability of competition to these *régimes* is debated on grounds which may be distinguished as transcendental and utilitarian.

(1) Competition is advocated as natural in an optimistic sense; as consonant with justice and abstract right. But (*a*) those who with Burke maintain that the "laws of commerce are the laws of nature, and therefore the laws of God," employ an argument from design which few now accept. And (*b*) the other metaphysical reasons presuppose an unreal freedom of competition. Actually, competitors do not start fair; inheritance and other causes favour some; want of capital, education, opportunity, handicap many (Wagner, *Lehrbuch der Pol. Oekon.*, § 100 *et seq.*) Society is stratified in "non-competing groups" (Cairnes, *Leading Principles*, ch. iii.; Mill, bk. ii. ch. xiv. § 2). Where mobility of labour from one group to another does not exist, there is no presumption that competition, thus hampered, effects an equitable distribution. Even if perfect equality of opportunity were attainable, natural ability would still constitute a non-competing group. Is it clear then that competition between workmen is "the only way to equity, and that any

interference with it must involve injustice?" (Danson, *Wealth of Households*, par. 811). Rather the coincidence of competition with justice is "a perfectly *a priori* assumption, an unproved supposition" (Wagner, *loc. cit.*)

(2) Rejecting the "metaphysical incubus" of abstract principles and rights (Jevons, *State in Relation to Labour*, ch. i.), let us weigh the utility of competition. Its tendency to equal distribution of wealth deserves place under this head (cp. Bentham, *Principles of the Civil Code*, pt. i. ch. vi.; J. S. Mill, *Utilitarianism*, p. 93). Also, in this *régime*, more than any other, each individual is stimulated by self-interest to do his best for the supply of others' wants. "The difficulty of finding any adequate substitute for it (the motive of self-interest) is an almost invincible obstacle in the way of reconstructing society on any but its present individualistic basis" (Sidgwick). However, "trusts" and other modern forms of monopoly are less blamed for inefficiency than for immoderate charges and gains (C. W. Baker, *Monopolies and the People*, 1889).

Competition is an almost ineradicable growth of self-interested human nature. "Expellas furcâ, tamen usque recurret." Combinations resisting the tendency of this force are liable to disruption. Professor Marshall says arbitrators "must not set up arrangements widely different from those which would have been brought about by competition." They should follow the example of Rennie, who, when he had to construct a breakwater, first ascertained "the slope at which the natural action of the waves would arrange a bank," and then "let stones into the water so as to form such a slope" (*Economics of Industry*, bk. iii. ch. viii. § 2).

Again, competition has the advantage of tending to a definite determinate adjustment; affording a simple intelligible rule, *laissez-faire*. Whereas the bargain between combinations is indeterminate; or only determinable by some extra-economic principle not commanding general assent (Sidgwick, *Political Economy*, bk. ii. ch. x. § 2; Menger, *Grundsätze*, ch. iv.; Edgeworth, *Mathematical Psychics*, pp. 20-56). Jevons says (*Scientific Primer*, ch. vii.), "there is no way of deciding what is a fair day's wages" outside competition. It is difficult even to imagine upon what other principle certain complicated transactions of modern trade and industry could be regulated.

Again, competition is a struggle for life which results in the survival of the fittest. However, the "selection" is not "natural," but artificial; so far as the competitors do not start fair (Wagner, *Lehrbuch*, § 135; above (1, *b*)). Nor is the "fitness" which economical competition tests of the highest order. Success may be due to cleverness in attracting business, or to a lower standard of comfort. That a degraded standard may result from unrestricted competition is shown in Booth's *Life and Labour of the People in London*. Mere survival, adaptation to "being" rather than "well-being," is not an ideal. (Sidgwick, *Theory of Evolution*, "Mind," vol. i.)

Against the advantages of the "struggle for life" should also be set the allegation of trade-unionists that in unregulated competition men injure themselves by over-exertion (Report of Trades-Union Commission, 1867), the infantile mortality, and other evils ascribed to the unrestricted employment of mothers (Jevons's *State in Relation to Labour*, ch. iii.).

Further objections to competition are that it defeats itself when the successful competitor, having crushed out his rivals, becomes a monopolist (see Hadley, *Railway Transportation;* Foxwell, "Des Monopoles," *Revue d'Économie Politique*, 1889). Again competition involves much waste of effort in advertising and search for employment;—much waste of capital, as when two railways are made where one would be sufficient. Again there are many arrangements which it is the interest of all combined to adopt, but of each acting in competition to violate; *e.g.* Sunday rest, or early closing of shops. Other disadvantages are stated by Professor Sidgwick with special reference to governmental regulation (*Political Economy*, bk. iii. ch. ii.)

The case for interference is *primâ facie* stronger with respect to foreign trade; where the object of government is not the interest of all parties concerned, but only of their own country. List maintains that the freedom of trade advocated by Adam Smith is best for the world as a whole; but that for particular countries it is better to develop their own manufactures by protection (*Das nationale System der Polit. Oekon.*)

So far, on the supposition that all parties are intelligent enough to know their own interest, and free to make their own terms. The case for interference is stronger where those conditions are wanting. The plea of ignorance is urged "in those special cases where it is impossible, or at least difficult, for the buyer of goods to verify their character for himself" (Jevons, *op. cit.*; Say, *Cours*, 4me *Partie*, ch. x.) Want of freedom is more difficult to define scientifically. Absolutely free competition nowhere exists (above (1, *b*)). Suppose as much mobility of labour to exist as in the case of Irish cottier-tenants before 1881, or the "sweated" workers in East London; if the terms established by the play of supply and demand are not favourable to those classes, shall we say that they are not free, or only not fortunate?

The general presumption in favour of competition may be outweighed in particular cases by the disadvantages which have been noticed. The balance of contemporary opinion seems inclining to the position thus indicated by Professor Sidgwick. "It does not appear to

me that the answer . . . in concrete cases can reasonably be decided by any broad general formula; but rather that every case must be dealt with on its own merits, after carefully weighing the advantages and drawbacks of intervention. The expediency of such interference in any particular case can only be decided by the light of experience after a careful balance of conflicting considerations."

[The authorities on this subject are innumerable. Prof. Marshall's *Principles of Economics* may be specially mentioned as showing (1) how deeply ingrained in our nature is the principle of competition, which makes itself felt even in institutions which seem to be only regulated by custom (2) how far from ideally perfect is the system of *laissez-faire*, since it is theoretically possible that governmental interposition should effect an increase of wealth (bk. v. *Doctrine of Maximum Satisfaction*).—The views of the older authorities are considered, and some new lights are imparted in Prof. Marshall's Address *On some aspects of Competition* to section F of the British Association, 1890.] F. Y. E.

COMPLEMENTARY GOODS. This expression is used by the Austrian economist Menger (*Volkswirthschaft*, 1871, pp. 11, etc.) who describes goods as of first, second, or higher rank in order of production. In the production of bread, for example, the bread itself would be of the first rank, flour, salt, yeast, the services of a baker and his bakery, etc., would be goods of the second rank; grain, mill, and miller's work would be goods of the third rank, and so on. In such cases the separate goods of each remoter rank must be combined, if they are to produce the goods of the rank nearer the actual consumption; they are complementary parts of a total. This conception becomes of special interest when the value of the complementary goods is considered for each separately; and this question has been carefully treated by Wieser (*der Natürliche Werth*, 1889, p. 101, etc.) and Böhm-Bawerk (*Positive Theorie des Kapitales*, 1889, p. 179, etc., English translation (1891), pp. 165, etc.) The discussion in J. S. Mill (*Political Economy*, iii. xvi.) of some peculiar cases of value (joint cost of production) followed up by Jevons (*Political Economy*, 3d ed. p. 197) is in many ways closely analogous. (See also *Quart. Journal, of Economics*, April 1889, p. 338.) (See Consumers' Goods.)

J. B.

COMPOSITION. See Bankruptcy.

COMPOUND INTEREST. Interest that arises from adding to the principal the interest as it becomes due and then considering the sum that accrues at the end of each stated time as a new principal. For short periods of time the compound interest of any sum differs but little from its simple interest, but if compound interest is allowed to accumulate for a number of years, the increase is very great. Any sum placed out at 5 per cent compound interest will double itself in $14\frac{1}{4}$ years. Hence at 5 per cent compound interest £1 would in $14\frac{1}{4}$ years amount to £2; in $28\frac{1}{2}$ years to £4; and in $213\frac{3}{4}$ years to £32,768. At simple interest the £1 in $213\frac{3}{4}$ years would increase to £11 : 13 : 9 only.

J. E. C. M.

COMPROMISE (Scots law). An actual adjustment of disputed claims by mutual concession. A. D.

COMPTES, Chambre des. In the reign of Philip IV., the *Cour du Roy*, the chief organ of the central administration in mediæval France was subdivided into three bodies, for the separate functions of administration, justice, and finance. These bodies were the *conseil du roy*, corresponding to the *concilium ordinarium* in England; the *parlement de Paris*, corresponding to our courts of king's bench and common pleas; and the *chambre des comptes*, corresponding to our Exchequer. The *chambre des comptes* originally followed the king, but was fixed at Paris by an edict of 1319. Its chief functions were to audit the accounts of the local *baillis* and *seneschaux*, to receive payments from the royal domain and direct taxes, and to decide judicial questions arising from these payments. Originally it had some voice in settling the amount and incidence of taxation, but its administrative functions were gradually curtailed by the growing omnipotence of the controller-general and the royal council. In the 14th century the *chambre des comptes* was a more important body than the parliament of Paris, and in 1339, when Philip VI. went to Flanders, he left the chief authority in its hands. But by the 18th century it had sunk into comparative insignificance, and is rarely heard of. The audit of accounts, which remained its chief function, had become a mere formality, and was often fifty years behindhand. But it must still have possessed some means of enriching its members, for its seats sold for a higher price than those in the other *cours souveraines*. The office of *conseiller* in the *chambre des comptes* was sold under Louis XV. for 150,000 livres; whereas the highest price in this century for a seat in the parliament was 60,000 livres, and in the *cour des aides* 45,000. The *chambre des comptes* was suppressed by a law of 7th September 1790, at which time it contained 289 officers.

[Gasquet, *Précis des Institutions Politiques et Sociales de l'Ancienne France*, Paris, 1885; Cheruel, *Dictionnaire Historique des Institutions de la France*, Paris, 1884.] R. L.

COMPULSORY PILOTAGE. Repealing all then existing legislation on pilotage, the Pilotage Act, 1913, c. 31, dealt *inter alia* with compulsory pilotage (§§ 10-15). By § 11 "Every ship (other than an excepted ship) while navigating in a pilotage district in which pilotage is compulsory for the purpose of entering, leaving, or making use (including

'moving about' by § 32) of any port in the district, and every ship carrying passengers (other than an excepted ship) while navigating for any such purpose," must be under a local licensed pilot or a ship's officer with that qualification, under a penalty of double the pilotage dues. Exempted ships are those belonging to His Majesty, pleasure yachts, fishing vessels, ferry boats plying solely within the limits of a harbour authority, ships under 50 tons gross tonnage, those specially exempted under any bye-law of a pilotage authority such as coastal traders, and home trade ships, and local vessels belonging to certain public authorities. The defence formerly available to an owner or master for damage caused by her navigation, namely, that she was under the control of a compulsory pilot, was abolished as from 1 January 1918 (§ 15).

Compulsory pilotage is based on the principle that the state is justified in interfering to protect ships and their cargoes from injury by other vessels owing to an inadequate knowledge of the dangers of navigation in specified ports and harbours and districts.

[See Marsden's *Collisions at Sea*, and the *Laws of England*.] W. A. B.

COMPULSORY PREFERENCE or "Preferential Payments." In the distribution of the property of a bankrupt and of the assets of a company being wound up the following debts are to be paid before all others, viz. one year's rates and taxes; four months' salaries of clerks or servants up to £50 each; two months' wages of labourers or workmen up to £25 each; workmen's compensation up to £100, and arrears of contributions to National Insurance. These debts rank equally between themselves (Bankruptcy Act, 1914, s. 33).

W. A. B.

COMPULSORY TAKING OF LAND. The right of the state to take land for public purposes, subject to the obligation of making compensation, has been recognised by all modern legal systems. This right may be exercised by the state itself or by individuals acting under the authority of the state. The object for which land may be taken compulsorily is stated to be "public utility." There is, however, great difficulty in defining "public utility," as it must vary in different countries owing to variations in material surroundings. Randolph suggests (*Law Quarterly Review*, vol. iii. p. 320) that undertakings should only be held to be of a public nature where they are such as the state itself or its subordinate political corporations might properly engage in, and he condemns the acts passed in the New England states to authorise the taking of land for the erection and maintenance of water power. In the United States a corporation taking land compulsorily *ipso facto* becomes liable to make compensation, since the written constitution recognises the right to compensation; in other countries provision for compensation is made by statute. The Code Napoleon by art. 545 declares "that no one is obliged to transfer his property unless it be for the public utility and in consideration of a just and previous indemnity." In the colonies, *e.g.* in New South Wales, provision has been made for resuming land for certain specified public purposes, and the land grants usually contain a clause relating to resumption. But in England no general law has ever been passed to define when land may be taken. Each taking of land must be authorised by special or general act of parliament. The Crofters Act, however, gives under certain conditions power to the crofter commissioners to enlarge crofter holdings.

English statutes on the compulsory taking of land fall into three classes: (1) Where compulsory powers have been conferred on public bodies for specified purposes, subject to a scheme being approved by a government department and to confirmation by statute. The Artisan Dwellings Acts, 1868-1882; 33 & 34 Vict. c. 75 (school sites); 44 & 45 Vict. c. 20 (post-office sites); and the Housing of the Working Classes Acts, 1890-1923, come under this class. (2) Where the statute gives a particular corporation, such as a railway company, power to take land. (3) The Crofters Act 1886, enabling a commission to enlarge crofters' holdings, Small Holdings Act, 1907. The prerogative right of the Crown to take land or buildings as required by the Defence of the Realm is fully discussed in A.G. *v.* De Keyser's Royal Hotel, Ltd. (1920), A.C. 508. (See COMPENSATION.) J. E. C. M.; W. A. B.

COMTE, AUGUSTE, the founder of *Positivisme*, was born at Montpellier 1798, and died at Paris, 1857. After studying hard, especially mathematics, he was received, the fourth on the list, at the École Polytechnique. Insubordination led to his expulsion from the school, and he found himself without position or means. After some fruitless efforts he attached himself, 1818, to Saint-Simon, whose secretary he became, succeeding in this office to the historian Augustin Thierry; but, in 1824, in connection with the bringing out of the *Catéchisme des industriels*, in which the *Système de politique positive*, due entirely to the pen of Comte, appeared, there arose a disagreement between the master and the scholar. Comte desired to be master in his turn. The idiosyncrasies of these two personalities, to neither of which energy can be denied, were certain, sooner or later, to lead to a separation. Comte married soon after, but overwork and the burden of worries which his disposition magnified to a remarkable degree, brought on a serious derangement of the brain. This attack was successfully overcome by care and nursing, but it would perhaps be rash to affirm that the cure was complete.

After a treatment for this serious malady which lasted nine months, A. Comte found

himself afresh in face of the most pressing monetary difficulties. However, he obtained in time the position of assistant to one of the professors at the École Polytechnique, and the post of examiner to the same school. He joined to this a place as usher in a private institution, and, thanks to the moderation of his requirements, was able to employ himself quietly with his favourite occupations. It was at this date that he composed the great work we shall speak of later on, and which, as we shall proceed to show, deals rather with philosophy than with economics.

With a little prudence and care he would have been able, in this manner, to continue the labours which he had most at heart. Unfortunately, a professorship of algebraical analysis which he sought for was given to Sturm. He made an enemy of Arago, who had been the cause of this appointment. His temper set the backs of the whole council of the school up against him, and he was removed from his post of examiner, and in consequence from that of assistant lecturer. It should be stated that he had fulfilled both these duties in the most complete and conscientious manner, besides having, from 1830 to 1848, given to the *Association Polytechnique* gratuitously, and without a single omission, a course of lectures on astronomy.

Deprived of his regular resources, separated by mutual consent from his wife, he had to depend for the means of existence on the purses of his friends and disciples. It is to be regretted that he, we may almost say, demanded this help, with some persistence and even with *hauteur*. He held that he had a right to these subsidies in return for the services which, as a philosopher, he rendered to civilisation.—It was a debt the repayment of which he claimed rather than assistance which he solicited (see his *Lettres à J. S. Mill*).

His great work, on which he had laboured for twenty years, his *Cours de Philosophie Positive* (6 vols. in 8vo) appeared 1839-42.

The fundamental idea to which Comte has given the name of positivism is, that "we know nothing but *phenomena*, and that the knowledge we have of these is relative and not absolute. We know neither the essence nor the real mode by which any fact is produced; we only know the relations of the succession or the similarity of facts one to another. These relations are constant, that is to say, always the same under the same circumstances. The constant resemblances which bind phenomena together, and the constant successions which unite them under the titles of antecedents and consequences, are what are termed their laws. The laws of phenomena are all that we can know of them. Their essential natures and their causes are unknown to us, and remain impenetrable."

He supported this doctrine by a historic theory which he called the Three Stages (*Théorie des trois états*)—the theological stage, including fetichism, polytheism, and monotheism; the metaphysical stage; finally, the positive or scientific stage. It will be seen that in all this we are rather at a distance from the domain of economics. Hence we must pause here in our exposition of the doctrines of Auguste Comte, contenting ourselves with reminding our readers that, after 1845, his mind underwent a transformation at which many of his disciples were justly astonished, and in which the majority of them declined to follow him. He, who previously had refused adherence to any form of worship, instituted one of which he made himself the high priest, and which, in its philosophy, borrows from pantheism, if not from fetichism. In his eyes, to quote only one example, it is due "to pay honour to the planets, especially to the sun and moon." He rearranged, rather let us say he reconstructed, his *Système de politique positive*, adding, as a sub-title, *ou Traité de Sociologie instituant la Religion de l'Humanité* (1851 in 8vo), he then composed a *Catéchisme Positiviste*, and finally a *Calendrier Positiviste*, in which he instituted saints and sub-saints, supplementary ones, selected from all countries and from all periods of time. He even went further than this; he established sacraments, and under his title of *pontifex* proceeded to administer them—the last wanderings of a mind elevated in some respects, but ill-balanced and driven out of its right course by many freaks of temperament, particularly by pride. Apart from his theosophy A. Comte has had and still has many distinguished disciples in France and abroad. He may be said even to have founded a school. We may quote among his disciples who are dead Littré, John Stuart Mill, and Grote the historian. A. C. f.

COMTE, AUG., AND ENGLISH POLITICAL ECONOMY. Comte's importance for the history of English political economy is due first, and chiefly, to his influence on John Stuart Mill. About 1830 Mill, dissatisfied with the views of his father and Bentham, was reading eagerly the tracts of the St. Simonians, including, at that time, one by Comte, which promulgated the law of the three stages of the evolution of science. In 1839, when Mill was planning his *Logic*, he took up the study of the *Philosophie Positive*. The conception of the inverse deductive method, described afterwards in the *Logic* as the proper method of historical and statistical inquiries (bk. vi. ch. ix., x.), was (he tells us, *Autob.*, 210) derived wholly from Comte. The two men corresponded with each other on cordial terms (1841-46), though they never met. This correspondence, so far as published (*Lettres d'Auguste Comte à John Stuart Mill*, Paris 1877), shows that Mill had substantially accepted the law of the three stages, and had been strongly impressed with Comte's

idea of a master-science of sociology, dealing both with the present order, or statics, of society and with its evolution, or dynamics. The idea was not new. It may be traced to Aristotle, and among economists Comte allowed that Adam Smith possessed it, while J. B. Say had discussed it with Comte himself (*Lettres*, p. 255). But Comte's exposition of it was original and striking. He gave Mill also a wider conception of what was meant by the general interests of humanity, embracing past, present, and future human beings as members of one body (*Aug. Comte and Positivism*, 1865, p. 135). Comte, too, first drew Mill's attention to the importance of the working classes as an element in all social movements; Comte had thought at one time of writing a special book on industrial life. He brought Mill to admit that in the universal *consensus* or solidarity of the phenomena of society no parts could be called independent of the others, and that the way to study the whole body of them was *not* (as Mill had said in 1830 in *Unsettled Questions*, publ. 1844, *e.g.* p. 146) Bentham's *a priori* method of deduction from known principles, but Comte's own method of first generalising from history and then verifying by deduction from known principles. We must learn to "predict the past" before we can know the present. The "limited and temporary value of the old political economy" (*Autob.*, p. 166) Mill learned not from Comte but from the St. Simonians. Comte soon found Mill was going on a way of his own, and had no intention of making his projected book on political economy a mere stalking horse for positivism (*Lettres*, p. 254). Mill still upheld the need of studying political economy by the *a priori*, as distinguished from the *inverse deductive* method, though he thought himself bound to show the modifications of *a priori* results in actual societies. Political economy must, provisionally, be a separate study. In the details of Mill's *Principles of Political Economy* (publ. 1848) Comte's influence is therefore not marked, though it was working, with other causes, to change Mill's views on the possibilities of human nature and the final constitution of society. After their correspondence, Mill recoiled from the object of his first attraction, though, for the sake of the public, he refrained from open criticism (*Aug. Comte and Pos.*, p. 3). He found in Comte too little heed for individuality and liberty. He agreed with Comte in appreciating the proletariat, deploring the existence of an idle class, and of labourers degraded by minute division of labour; he admired his idea that possessors of wealth should regard themselves as public functionaries. But he refused to place the supreme government in the hands of the wealthiest capitalists, or to trust to the moral influence of a body of philosopher priests, for the securing of a fair and generous distribution of wealth. Though he regarded distribution as being, unlike production, under no "necessities of nature" (*Autob.*, p. 247) but under laws of arbitrary human institution only, Mill sought for progress by associations and by democratic government and legislation as well as by moral and intellectual improvement among people and rulers. Comte's social statics seem to Mill his weakest point. On the position of women, for example, the two authors are irreconcilable. Finally, Comte was nothing if not systematic; Mill was essentially eclectic. Otherwise the influence of Comte might have had the same effect on him as on Harriet Martineau, who abandoned all distinctly economical work when she gave up the particular economic doctrines she had herself helped to popularize.

If in England the application of the "historical method" to economics was (as is sometimes said) suggested by Comte rather than by English or by German writers, it was not, at least, through Mill's precept or Mill's example. Cliffe Leslie's indebtedness to Comte is not clearly acknowledged by the former (*Essays*, 1879, pp. 241, 411). Sir Henry Maine and Professor Thorold Rogers seem free of all debt to him. The controversy between Cairnes and Mr. Frederic Harrison on "Comte and Political Economy" (see *Fortnightly Review*, May and July 1870, Cairnes, *Essays in Political Economy*, etc.), served to make the issue clearer: Can there be a political economy as a study distinct from general sociology? But it was after Prof. J. K. Ingram's address to the British Association (in 1878), which put the Comtian criticisms in a broadly intelligible form, that the historical economists obtained recognition in this country as a distinct school. Prof. Ingram has since followed up the attack by a *History of Political Economy* (1888). Hitherto, both in this country and in America, the tendency of this movement has rather been to attract the attention of historians to the importance of the economic element in history, than to draw away any considerable number of economists from the study of economic theory (see Historical Method; Positivism, etc.) J. B.

COMTE, Charles, born at Sainte Eminie (Lozère), 1782, died at Paris, 1837. His father, a warm partizan of the Revolution, gave Comte a rigid training which influenced him all his life. To this may be ascribed his vote in 1804 against the establishment of the empire, and the vote was *nominative* and signed with his name. Comte had to pay the penalty of his courage. As a consequence he devoted himself to the study of law, and founded, June 1814, a periodical *Le Censeur* (7 vols. in 8vo). Charles Dunoyer joined him in this. The two edited this organ, established in support of law and liberty, and hence as hostile to the legitimist reaction as to the pretended liberal empire. A

pamphlet on the subject of the day, energetically written and frankly brisk in style, *De l'impossibilité d'établir une monarchie constitutionnelle sous un chef militaire et particulièrement sous Napoléon*, brought on them a prosecution which did great honour to their spirit. The *terreur blanche* obliged them, towards the end of the year 1815, to suspend their journal, which they did not resume till 1817, under the title of *Le Censeur Européen* (12 vols. in 8vo), with the motto *Paix et liberté*. In the interval (1815-17) Comte, probably incited by Dunoyer, took up the study of political economy, associating himself in this with J. B. Say, whose son-in-law he shortly became. Notwithstanding private and public persecution and prosecution, the *Censeur Européen* was able to hold on its existence to the date of the assassination of the Duc de Berry (13th February 1820). This sad event rendered the maintenance of the contest impossible, and the editors were compelled, in face of a sentence which condemned them to imprisonment and a heavy fine, to abandon their straightforward and courageous publication.

Comte preferred exile to prison. He went first to Geneva and then to Lausanne, where he was appointed professor in natural law (*la morale*). The *Sainte-Alliance* was alarmed at this series of lectures given by so able a professor, and demanded his expulsion. The Canton de Vaud desired to resist, but Comte, in order to avoid bringing anxiety, perhaps even worse, on the territory which had befriended him, retreated to England while waiting the reversal of his sentence. He was, however, unable to defend his case, as the government refused to allow the registration of his notice of appeal. He then pursued his economic studies, and published, May 1826, his *Traité de législation* or exposition of the general laws by following which states prosper, perish, or remain stationary (4 vols. in 8vo), a work as much economic as judicial in tone, but which approaches in character closer to the *Esprit des Lois* than to a treatise on political economy. The author shows himself throughout a worthy disciple of the master whose daughter he had married. We may add that the *Académie Française*, in 1828 (under the *Restauration*) awarded Comte the *grand prix Montyon* as the author of the work of the greatest service to morals.

Less even than Dunoyer did he know how to lend himself to half measures, to accept compromises. Thus in 1830, being named *procureur du roi* for the tribunal of the Seine, after having been elected *Député de la Sarthe*, Comte could not remain long in possession of this office, and returned to the labour of his choice—scientific study. The *Académie des Sciences morales et politiques* was re-established by royal ordinance 26th October 1832; he joined it and became himself the first perpetual secretary. In this capacity he delivered the *éloge* on Garat, and composed that on Malthus which death hindered him from reading. In 1834 he published his *Traité de la propriété* (2 vols. 8vo), a work, this time, exclusively economic, and the scientific importance of which is in no way behind his *Traité de législation*. The following year a second edition of the work last named appeared. Although Comte had experienced a disappointment in seeing Rossi preferred to him for the chair of political economy at the *Collège de France*, vacant through the death of his father-in-law, the nobleness of his nature kept him from bearing any grudge against his successful competitor, and, though he had been ill for four months, he caused himself to be carried into the Institute the 17th December 1836 to vote in his favour as a candidate for election to the *Académie des Sciences morales et politiques*. Some months after he expired. Mignet, the second perpetual secretary of that academy, read, 30th May 1846, at a solemn meeting of that body, a notice of Charles Comte in which full justice was done to the lofty character of this illustrious thinker.

A. C. f.

CONCESSION. A term not used in English law, but the word, or some similar word, is used in many foreign countries to denote the permission given by the government to the undertaking of certain works, or to the formation of certain societies or companies, in the cases in which such permission is necessary. This term has been current in France especially for the last three centuries or so in the sense of a right of property, privilege, or monopoly granted by government—to individuals or groups of individuals,—in land, mines, public works, performance of stage-plays, and generally speaking in anything that can be monopolised. At present it is used most often of mines, as in the case of the ruby mines of Upper Burmah; tramways *passim*; railways, as in France, where the "concession" is terminable, and rights revert to the state; trading privileges including especially exemption from duties, as in the Russian "concession" to the Anglo-Siberian Company; and banks, as in the case of the Imperial Bank of Persia. "Concessions" of the nature of patents or monopolies were at one time (1889-90) granted by the Boer government in the Transvaal so lavishly and at such inadequate fees as to cause great public discontent; they included cordage, paper, paints, ropes, furniture, matches, electric lighting, and jam. The expediency of raising revenue in such a way will be discussed under Monopolies; Patent. J. B.

CONCILIATION, Boards of. These boards are established in different industries with the object of preventing and adjusting industrial disputes between employers and employed. They consist of representatives of masters and of men engaged in the industries, with which they are concerned, who meet

together to endeavour to settle by discussion and mutual agreement any disputes which may arise. A typical illustration of their constitution and working may be found in the board established in 1869 in the manufactured iron trade of the north of England. Here the men belonging to the different works select in each case by ballot a delegate, and the employers belonging to a single firm are similarly represented by a single delegate. The members of the board thus constituted elect a president, together with one secretary, from among the delegates of the masters, and a vice-president, together with a second secretary, from among the delegates of the men. They also elect a standing committee, as it is called, consisting of five representatives of the men, and ten representatives of the masters (five of whom alone are able to discuss or vote on any question); and of this committee the president and vice-president are *ex officio* members, without enjoying any power of voting. The standing committee meets every month or, if occasion demands, more frequently, and the board itself meets twice a year and at other times when summoned by the committee. In the first instance all questions are laid before the committee. They are submitted in writing to the secretaries seven days before the meeting; the written reply of the other side is usually placed before the same meeting, and an agreement of submission signed by the parties concerned. If the standing committee cannot arrive at an agreement, the referee, who is a permanent official, is called in and can take evidence; and in this way all questions may be settled, except a general advance or reduction in wages, or the appointment of an arbitrator (see ARBITRATION BETWEEN EMPLOYERS AND EMPLOYED). These questions the board alone can decide, and it also determines matters referred to it from the standing committee, selecting an arbitrator if it cannot itself arrive at an agreement. The necessary expenses of the board are defrayed by the subtraction of a penny every fortnight from the wages of every workman earning upwards of half-a-crown a day, and by requiring each firm to pay an amount equal to that thus subtracted. Similar boards have been established in the Nottingham hosiery trade, the boot and shoe trade, etc.; in the coal and iron and steel trades in connection with sliding scales (see SLIDING SCALE). The constitution of these boards is, with some differences of detail, similar to that described, which is based on the model of the French CONSEILS DE PRUD'HOMMES (*q.v.*) The cotton-spinning, engineering, ship-wrights, building trades, and the railway companies follow somewhat different systems. The advantage of this method of adjusting industrial disputes over that of arbitration is chiefly that the decision is attained by friendly and informal discussion and mutual concession, and therefore is more likely to be faithfully observed, and less calculated to leave behind a feeling of irritation. L. L. P.

District boards have been formed to deal with disputes occurring in any trade in the district with which they are connected, the first having been established in London in 1890. In 1896 the Conciliation Act was passed giving power to the Board of Trade to take steps to arrange actual disputes or to form conciliation boards where required, etc. Many voluntary boards appeal to the Board of Trade to assist in the settlement of differences. There has been no legislative compulsion connected with conciliation hitherto though there is a body of opinion in favour of it. There are about 200 boards of conciliation and arbitration in the United Kingdom dealing with about 1500 cases annually. [See *Ann. Repts. of Labour Dept. of Bd. of Trade on Strikes and Lock-Outs*; *Labour Gazette* (monthly journal); *Rept. on Rules of Voluntary Conciliation and Arbitration Boards*; *Repts. of the Bd. of Trade on proceedings under the Conciliation Act, 1896*; N. P. Gilman, *Methods of Industrial Peace* (1904); A. C. Pigou, *Principles and Methods of Industrial Peace* (1905); ENGINEERING AND ALLIED INDUSTRY AGREEMENTS in Appendix.]

CONCOURSE (Scots law). Concurrence or consent, *e.g.* concourse of the lord advocate to criminal prosecutions by private persons. A. D.

CONCURRENCE (Scotland). Backing a warrant by a J.P. A. D.

CONDILLAC, ÉTIENNE BONNOT DE (1714-1780), Abbé of Mureaux, younger brother of Mably, born at Grenoble, died at Flux near Beaugency. As a philosopher of the school of the sensationalists, he published much-valued works based on that system. As an economist he published, 1776, *Le Commerce et le Gouvernement considérés relativement l'un à l'autre*, described by Jevons as "original and profound." He supports the doctrines of the physiocrats, except in regard to industry, which he considers as productive. This work is reproduced in *Mélanges d'économie politique* (*Collection des principaux économistes*, Guillaumin, 1847). A. C. f.

CONDITIONING. In textile industries, mainly in the silk trade, "conditioning" covers the process of determining the quality, net weight, and description of raw material, or of yarns, etc.; a *conditioning-house* is an establishment where at fixed charges such material may be prepared and arranged, and an official warranty as to condition obtained. Conditioning-houses and boards exist in most textile manufacturing districts on the continent. In some places, such as Lyons, they are public establishments, that at Lyons dating from 1779; while in others they are houses provided by committees of the merchants themselves, and their verdict as to weight and quality is accepted as conclusive; but they are, as yet, scarcely known in the United

Kingdom, and the advantages they offer have not been properly recognised. The only conditioning-house in London of which there is record—it is possibly the only house of this nature in the United Kingdom—is the Trade Silk Condition Company, Limited, of Worship Street, E.C., which publishes a scale of charges arranged under the following heads:—Conditioning; Weighing; Boiling-off and Washing; Assay of Size; Assay of Spin and Throw, or Elasticity and Tenacity; directions being given under each head. This house has been in operation for many years, and not only furnishes the weight of the raw silk when freed from moisture and the numerous impurities to be found in the bales, but tests it in various ways, and by so doing places upon the tested article an unbiassed official stamp, which interested vendors and purchasers themselves could hardly do. It also carries its operations further, as the raw material is duly prepared for manufacture. In the same establishment wool can by arrangement be conditioned. It will be gathered from this that conditioning partakes of the nature of SAMPLING and GRADING, terms employed in various other trades, operations which will be found dealt with under those heads.

Some few years ago a small establishment for conditioning silk was started in Manchester, but it has either ceased to exist or to carry on operations as a separate undertaking. The Bradford chamber of commerce, amongst others, has for a considerable time past advocated the establishment of a conditioning-house in connection with the wool trade of that district, such an undertaking to be conducted by the corporation of Bradford. Parliamentary powers were duly obtained some years ago, but this conditioning-house is not yet established, although there are some prospects of a start being made in respect to it. Such an official undertaking might well become a decided success, and the Bradford standard be recognised throughout the entire Yorkshire woollen and worsted districts. It is evident that such establishments are to the advantage of the manufacturers of high quality goods, and enable them the better to draw the line between genuine and counterfeit materials. In this way, French, Italian, and other continental silk manufacturing districts have long recognised the advantages afforded, and it remains to be seen whether, if the Bradford corporation take the affair up in earnest, the conditioning-house will not soon become a recognised necessity of the textile industries in this country.

[See for conditioning at Lyons article on "Condition" in the *Nouveau Dictionnaire d'Économie Politique* and *Monographie de la Condition des soies de Lyon*, par Adrien Perret, Lyon, 1878.]

CONDORCET, MARIE CARITAT, Marquis de (1743-1794), born at Ribémond near Saint Quentin, died at Bourg-la-Reine. He won his first laurels as a mathematician, and showed in this study qualities which astonished the most distinguished *savants* of his time. When he was twenty the Académie des Sciences considered an *Essai sur le Calcul Intégral*, from his pen, worthy to appear in the collection of their memoirs, and, in 1769, the same learned body received him into their number, appointing him, in 1773, their perpetual secretary. He soon won the friendship of Turgot, by whom his attention was turned towards political economy. Under the inspiration of Turgot he wrote various articles or works, among others *Les Réflexions d'un Laboureur de Picardie à M. N. . . . auteur prohibitif, à Paris*, 1775; and *Les Réflexions sur le commerce des bleds*, 1776, two writings directed against M. Necker, that *auteur prohibitif* who had brought out, May 1775, his work *Sur la législation et le commerce des grains*. The Académie Française admitted him, 1782, among its members. Condorcet's activity did not slacken up to the first days of the Revolution; in 1781 he published the *Réflexions sur l'esclavage des nègres* (there is no need to say that he was an abolitionist), then, in 1785, his *Essais sur l'application de l'analyse à la probabilité des décisions rendues à la pluralité des voix* (in 8vo); in 1786, *La vie de Turgot* (in 8vo); about 1787, *De l'influence de la Révolution d'Amérique sur l'Europe*, dedicated to Lafayette, which indicates the course of events at that time; in 1788, *Essai sur la constitution et les fonctions des assemblées provinciales*; in 1789, *Banque Nationale* (in 4to); and in 1790, *La fixation de l'impôt* (in 8vo). He did not belong to the Assemblée constituante but was member of the Assemblée législative and of the Convention which succeeded it. We shall not attempt to sketch out his career, which was frankly that of a republican but a friend of law and liberty during the Revolution. It may suffice to say that his pen was never inactive and was vigorously supported by his eloquent words. Proscribed as a Girondin, he was sheltered for eight months by a devoted woman. It was then that he wrote his *Esquisse d'un tableau historique des progrès de l'esprit humain*, 1794, an eloquent tribute to the doctrine of the indefinite perfectibility of man.

Learning that the penalty of death had been pronounced against those who received the Girondins into their houses, he departed, not heeding the prayers of his courageous hostess, and wandered for several days. Entering a tavern at Clamart to appease his hunger, he was arrested by order of a member of the revolutionary committee, and thrown into a prison, where he was found dead the next day when sought for to be brought before his accusers. He had, it was believed, taken his life with a poison which he carried on him. Quick in

intelligence, vigorous in mind, passionately loving what was right, his was one of the worthiest and purest natures concerned in the first French Revolution. A. C. f.

[For a criticism of the *Esquisse*, see Malthus, *Essay on Population*, bk. iii. ch. i. (Bonar, *Malthus and His Work*, bk. i. chs. i. and ii.) Condorcet's application of the theory of probabilities to the estimation of evidence in his *Essais sur l'application de l'analyse à la probabilité des décisions rendues à la pluralité des voix* . . . above noticed, claims the attention of the statistician. A very unfavourable verdict is pronounced on this part of Condorcet's work by Todhunter in his *Theory of Probability*.]

CONDUITT, John (1688-1737), married Newton's niece, and succeeded Newton as master of the mint. His principal work, *Observations upon the Present State of our Gold and Silver Coins*, 1730 (published 1774), is supposed to represent Newton's views. It contains a luminous statement of the principle, that in order to keep silver in circulation, the "rate at which gold shall be current" should be the same as in neighbouring countries. Conduitt is referred to in Boulter's letters in connection with the Irish coinage. He was a member of parliament, and a fellow of the Royal Society, to which, in 1718, he contributed a learned paper on "The Situation of the Ancient Carteia."

[Brewster, *Memoirs of Sir Isaac Newton*.—Jevons, *Investigations in Currency and Finance*.—De Morgan, *Newton, his friend and his niece*.] F. Y. E.

CONFIDENT PERSON. See Bankruptcy in Scotland.

CONFIRMATION OF EXECUTOR (Scots law). Proving a will as executor. A. D.

CONFLICT OF LAWS. The break-up of the Roman Empire, as Huber points out, was the cause of that *conflictus legum* from which the present system of private international law has sprung. This conflict was between the personal law to which the individual owed obedience by reason of his nationality, and the territorial law to which he owed obedience by reason of his residence within its territorial limits. As independent States arose, and intercourse between them became more frequent, some system by which the personal law of individuals might be recognised was found necessary. Reciprocity was in many instances secured. But anything like a system by which the proper limits of the authority of the respective municipal laws were defined, did not arise until the modern development of commerce made it a necessity. Municipal law is particular in its application. Within its own territorial limits it is supreme, but its authority over foreigners within those limits, or over its own citizens outside them, is more questionable. The "Conflict of Laws," or "Private International Law," is concerned with cases which contain or may contain some foreign element. But the Courts will not entertain every such case. The judge must first determine whether it is one on which he has a right to adjudicate. When, for instance, the claim is for the recovery of land in a foreign country, an English judge has no jurisdiction by the law of England. Secondly, the judge, assuming he has jurisdiction, must determine what law is to be applied to the case before him. Here there is a conflict in the mind of the judge as to the choice of law. Hence the true meaning of the term "Conflict of Laws" is not the conflict between two or more systems of law, but the conflict in the mind of the judge as to which system in the particular circumstances he ought to apply. Both questions are governed by definite principles, which will be enforced by the Courts of every country, and which form part of the law of England. The rules governing the choice of law obtaining in various States, although not identical, are very similar. They have been classified as follows: (1) *lex personalis*, or the law of the country to which a person belongs, either (*a*) by domicil or (*b*) by nationality; (2) *lex actus*, or the law of the country where the legal act takes place, of which the *lex loci contractus* is a subdivision; (3) the *lex loci delicti*, or the law of the country where the wrong is committed; (4) *lex loci solutionis*, or the law of the country where performance is to take place; and (5) *lex fori*, or the law of the country where the Court is situate in which the action or legal proceedings are brought.

[Dicey and Keith, *Conflict of Laws*, 3rd ed., 1922; Westlake, *Private International Law*, 6th ed., by Bentwich, 1923; Foote, *Private International Jurisprudence*, 5th ed., by Bellot, 1924. See International Law, Private (two articles).] H. H. L. B.

CONFUSIO. A term of Roman law meaning—(1) the intermingling of things in such a manner as to render the separation of one of the component parts impossible (*e.g.* the pouring together of two separate quantities of liquid); (2) the extinction of a smaller right by being merged into a larger right (*e.g.* a pawnee acquires the absolute property in the pawned object). E. S.

CONJUNCTUR. Recent German economists use this word to denote the conditions and opportunities of success which a man does not owe to his own efforts, but receives as a gift of fortune. For example, inherited wealth, influential parentage, and even nationality and education, give a good start in life which would be described as due to *Conjunctur*. It is perhaps most often used of the happy concurrence of circumstances by which the speculator is enabled to realise a fortune without labour but at the same time without breach of the rules of competition. Modern socialists, even of the

moderate schools, contend that in modern society *Conjunctur* and not skill or industry is the maker of fortunes; and they would restrict the influence of *Conjunctur* by alterations in the tenure of property and the conduct of business (see SOCIALISM).

[For a discussion of the "Wesen und Wirkung der Conjunctur," see A. Wagner, *Volkswirthschaftslehre*, Leipzig, 1879 (*Grundlegung*, p. 98, *seq.*)—See also Marshall, *Principles of Economics* (1890), pp. 656, 692 n.] J. B.

CONQUEST. The appropriation of the property in and of the sovereignty over a part or the whole of an enemy's country by force of arms. Though the title is usually regulated by the terms of a treaty of peace, the conquest is complete from the time the conqueror proves his ability to maintain, and his intention to retain, the territory as part of his own state. As a rule, the inhabitants retain their rights, except in so far as they are necessarily altered by the fact of conquest. Allegiance to the former sovereign is dissolved, but consent is necessary before allegiance is acquired by the new sovereign. Usually a limited time is given within which the inhabitants must transfer their allegiance or leave the territory. In return for allegiance the rights of citizenship are acquired. Municipal laws, including the rights of property, remain unchanged, except in so far as they are necessarily altered by the political institutions, or are in conflict with the laws of the new state. A country conquered by England becomes a dominion of the crown, and the crown may determine the form of government.

[Hall's *International Law*, Oxford, 1890.—Max Wirth, *Grundzüge der Nat. Oekon.*, considers "Conquest" as a form of "highly skilled labour."] J. E. C. M.

CONRING, HERMANN (1606-1681), was one of the most eminent of the polyhistors of the 17th century. The estimation in which he was held in his own time is sufficiently proved by his epitaph, written by Meibomius—"Juris naturalis gentium publici doctor, philosophiæ omnis peritissimus practicæ et theoreticæ, philologus insignis, orator, poeta, medicus, theologus. Multos putas hic conditos. Unus est, Herm. Conringius, sæculi miraculum." He was born in East Friesland, and studied medicine at Helmstädt, where he was afterwards professor in that faculty; he was also for some time court physician to Christina of Sweden. He early accepted and zealously propagated the Harveian doctrine of the circulation of the blood. His principal field of distinction lay, however, in politics and jurisprudence. He was among the first who formed a comprehensive conception of a science of political economy; he explains his ideal of it in his dedication of a new edition of the principal writings of Bodin, adding that such a body of doctrine, "Eam artem [Chrematisticam] in justam aliquam et integram methodum redactam non esse," though many scattered contributions to it might be found in various writers. He himself hoped to realise this scheme; he produced, however, only a number of separate writings on special heads: *De re nummaria*, 1662; *De Vectigalibus* and *De Aerario*, 1663; *De importandis et exportandis* and *De commercio et mercatura*, 1665; *De contributionibus*, 1669. His historical importance lies not so much in the complete treatment of economic questions as in the awakening and stimulating influence which he exercised both by his books and his personal teaching. In his great statistical work, *Examen rerum publicarum totius orbis*, he gives but little numerical detail, as was natural at his period, but has many just historical and political views (Roscher, *Gesch. der Nat. Oek. in Deutschland*, p. 254). J. K. I.

CONSCRIPTION. Compulsory military service. In modern times introduced by Napoleon I., followed by Prussia, and since 1870 adopted by all the great continental powers. On the continent every male citizen capable of bearing arms becomes liable to military service on completing his twentieth or twenty-first year, but in some countries service can be avoided by a money payment or by passing an examination. The period of active service varies from one to four years. The liability to serve is universal, *e.g.* in Prussia and in France; but in some countries, *e.g.* in Russia, the number from whom full service is required is fixed every year. After completing the period of active service the men pass into the reserve, and are liable to be called upon in the event of an outbreak of hostilities. In Holland and Belgium, though the army is based on conscription, the greater part of the forces is formed of volunteers. Switzerland maintains no standing army, but every citizen is liable to serve, and the troops are called out for a few weeks' training in the year.

The social and economic effects of the military systems of Europe have been discussed by Cliffe Leslie (*Essays in Political and Moral Philosophy*, Dublin, 1879). Whilst admitting that the training of a soldier tends to make the workman more efficient, he points out that even a three years' system postpones to a late period the productive use of a part of the productive power of the country, whilst a longer period unfits the greater number of men for industrial pursuits. Adam Smith (*Wealth of Nations*, bk. v. ch. i.) thought that the progress of manufactures and improvement in the art of war would tend to make the soldier's a separate trade, but the tendency has been in recent years to make the army a national one. Whilst therefore a war between two states in which all the citizens are soldiers implies that the industrial population are fighting in the ranks, it must not be forgotten that wars are of much shorter duration now than in former times. It is very difficult

to make any comparison between the relative cost of armies. The most recent information will be found in Major-General Brackenbury's *Evidence before the Select Committee on Army and Navy Estimates*, 1887, Appendix to First Report, and in the *Journal* of the Statistical Society, March 1891, "Statistics of the Defence Expenditure of the chief Military and Naval Powers," by Sir Charles Dilke. Germany, with compulsory service and an expenditure of £60,000,000, can put over 4,000,000 troops in the field in time of war; England, with voluntary enlistment and an expenditure of £28,000,000, can only put 275,000. The difference arises from the greater cost of living in England, the higher rate of pay, and the large number of foreign dependencies to be garrisoned (see DEFENCE, COST OF). J. E. C. M.

CONSEILS DE PRUD'HOMMES. These councils are found on the continent in France and in Belgium, and have for their object the adjustment of industrial disputes by a rapid and inexpensive method. They are said to have originated in the experts or *prud'hommes* selected by the mediæval guilds to settle disputes between manufacturers and merchants at the different markets and fairs about the genuineness of goods and other such matters. They were abolished before or during the Revolution, but were re-established at Lyons some ten years later, and subsequently in other French towns. They consist of representatives elected in equal numbers by masters and men, and the election is conducted by the *maire* and *préfet* of the particular town or district. In Paris there are four such *conseils* to deal with the many trades and industries there found. The *conseil* thus elected lasts for three years, and is divided into two *bureaux* or committees. The *bureau particulier*, consisting of one master and one man, sits daily, and the *bureau général*, consisting of at least five members, meets weekly. Disputants are first *invited* to come before the *bureau particulier* and to explain their differences, and arrive, if possible, at an amicable settlement. Should this attempt fail, they are formally *summoned* before the *bureau général*, which disposes authoritatively of the matter in the same way as an English arbitrator (see ARBITRATION BETWEEN EMPLOYERS AND EMPLOYED). Appeal from the decision of the *bureau général* lies, however, to the tribunals of commerce and the ordinary civil courts, but such appeals are apparently seldom made. Petitions for the establishment of the *conseils* are addressed to the minister of commerce. Statistics of these French *conseils* show that previously to the Franco-German war the number of cases brought before them had grown to a maximum of some 45,000 in the year 1868, and that after experiencing a temporary decrease during the war until they had fallen to some 30,000 in 1873, in 1880 they had risen again to some 40,000. Of these some 60 per cent related to wages—but not to their regulation for the future, simply to the determination of disputes as to the past; some 13 per cent arose about dismissals; some 10 per cent were concerned with alleged misbehaviour; some 5 per cent with questions of apprenticeship; and some 13 per cent with various other matters. The majority of cases were settled by the *bureau particulier*, but a large proportion were adjusted outside the *conseils* altogether. In Belgium there are similar *conseils* to those in France, and a proposal has more than once been made to establish something after their pattern in England. An act, which has proved inoperative, was passed with this object in 1867 (30 & 31 Vict. c. 105).

[For an account of these councils see Price's *Industrial Peace*, ch. iii.—Jevons's *State in Relation to Labour*, ch. vii.—an article on "Conseils de Prud'hommes," by W. H. S. Aubrey in the *Contemporary Review*, April 1883—and a paper on "The Strikes of the past Ten Years" by G. P. Bevan in the *Statistical Journal* for March 1880, vol. xliii. pp. 35 to 64.—Parly. Papers, c. 5896-17 and c. 6206-18.] L. L. P.

CONSIDERATION. A consideration in "value" is not necessary to a contract in Scotland either by deed or not by deed. A. D.

CONSIGNEE. A person to whom goods are shipped. A person whose orders the master of a vessel is to follow, by virtue of the clauses of a charter party, is called the consignee of the vessel.

CONSOLIDATED FUND. The division of the British revenue between the *Consolidated Fund* and *Annual Supply* will be best understood from the following official statement derived from Public Income and Expenditure, Returns ordered House of Commons 24th July 1866, pt. ii. p. 511.

"From the period of the establishment of a systematic parliamentary control over the expenditure of the public moneys, that portion of the total issues from the exchequer during the financial year, which is more strictly called the public expenditure, has always been divided into two separate and distinct general heads. The first of these is composed of the more permanent charges which have been authorised by parliament to be paid from time to time when due, the mode and period of payment being under the directions of the treasury. The second head consists of the charges annually granted by parliament, and thus brought periodically under its immediate cognisance and control. Since the establishment of the consolidated fund in 1786, these two heads of public expenditure have been known as the consolidated fund charges and the annual supply charges, so designated from the funds out of which they are respectively payable.

The consolidated fund charges have been usually subdivided into—

The annual charges of public debt.
Civil list.
Annuities and pensions.
Salaries and allowances of certain independent offices.
Courts of justice.
At this date [1866] diplomatic salaries and pensions (now included among annual supply charges).
Miscellaneous charges.

The general heads of the supply charges are—
The classified miscellaneous civil services.
Payments out of gross revenue; or, since 1854, the charges of collection and management of revenue.
Army, navy, and ordnance services.

The other issues from the exchequer, consisting of—
Advances by way of loan.

Sinking fund and other payments for the reduction of the national debt have formed part of the consolidated fund charges, or the annual supply charges, according to the parliamentary enactments by which these issues have been authorised" (Public Income and Expenditure, or Return ordered 24th July 1866, pt. ii. p. 511).

In explanation of this arrangement, A. Todd remarks—

"'Formerly,' that is after 'the old system of retaining public money at the exchequer itself' was 'abolished,' 'the proceeds of parliamentary taxes constituted separate and distinct funds'; but by the Act 27 Geo. III. c. 13, § 47, it was directed that the various duties and taxes should be carried to and constitute a fund, to be called 'The Consolidated Fund.'" (These permanent grants out of the consolidated fund are recapitulated above in the extract given from the Report on Public Moneys.) Todd continues: "These charges are made payable out of the consolidated fund by permanent statutes, from year to year, without any renewal of parliamentary authority. The principle of not subjecting to the uncertainty of an annual vote the provision for the security of the public creditor, the dignity of the crown, annuities and pensions to royal and distinguished persons, the salaries of judges and other officers in whose official character independence is an essential element, compensation for rights surrendered, and like charges, is one the soundness of which is generally admitted."

(Alpheus Todd, *On Parliamentary Government in England*, vol. i. pp. 733, 737, 2nd edition.)

Todd further raises a question whether in certain cases amounts may not have been carried to the consolidated fund which should have been voted as part of annual supply, but those who are conversant with the practice of the House of Commons in the discussion of the annual votes will agree that little would be gained in the way of real economy by this course being pursued.

CONSOLIDATIO. In Roman law this expression was used for the extinction of a usufruct in consequence of the usufructuary becoming the owner of the property to which it referred. It is also a technical term used by writers on feudal law, and is by them applied to the termination of a vassal's right by surrender, escheat, or some other cause which restored the beneficial rights of ownership to the lord. E. S.

CONSOLS. A stock exchange abbreviation for "consolidated annuities," originally applied to the 3 per cent consolidated annuities of 1751 (25 Geo. II. c. 27) which bore interest payable on 6th January and 6th July. These 3 per cents were converted in 1888 into stock bearing interest at $2\frac{3}{4}$ per cent till 1903, and after that date at $2\frac{1}{2}$ per cent till 1923. The amount of these consols when first issued in exchange for pre-existing securities was £9,137,812, but they were afterwards increased to about £400,000,000: by 1888 they had been reduced by purchase in the market and by conversions into terminable annuities to £322,681,000. In 1889 Mr. Goschen completed the redemption of this enormous amount of stock, and these 3 per cents, which for upwards of a century were reckoned as the standard security of the London market, will soon be unknown there. They are now only a matter of history. The 3 per cent reduced annuities, although a similar, and at first a larger, issue, were never designated consols.

But the familiar term "consols" has recently been applied to a number of other investments. There are New Zealand 5 per cent consols, Cape of Good Hope 4 per cent consols, and other government securities, which are currently designated consols by dealers upon the exchange simply because the word is more readily spoken and written than consolidated stock. It is also at times applied to other consolidated stocks than those issued by governments (see CONVERSION OF BRITISH NATIONAL DEBT).

CONSPIRACY, COMMON-LAW DOCTRINE OF. Though there were some dicta to the effect that a combination for the purpose of raising wages would be unlawful, no case of a conviction for such an offence occurred until the year 1825. Mr. Justice Stephen is therefore led to conclude that up to that year an agreement to combine to raise or depress the rate of wages was not an indictable offence apart from statute. The opposite view was entertained by many persons and was enforced by the courts. "Reading Sir W. Erle's summing-up in this case (R. *v.* Rowlands, 2 Den. Cr. Ca. 364) and his memorandum on trade unions together, it seems that his view of the subject of conspiracies in restraint of trade was this—at common law all combinations of workmen to affect the rate of wages were illegal. A limited exception was introduced by the 6 Geo. IV. c. 129. But the

ordinary operations of a strike which do not fall definitely within those narrow exceptions are still illegal conspiracies." This view was enforced in subsequent cases, but by the 22 Vict. c. 34, workmen were not to be considered guilty of "molestation" or "obstruction" under the act of 1825 by reason of entering into agreements for the purpose of fixing wages or the hours of labour. A commission, issued in 1867, recommended a relaxation of the law, and the 38 & 39 Vict. c. 31 legalised trade unions, whilst the 38 & 39 Vict. c. 32 amended the law relating to "molestation." The decision in 1872 in the gas stokers' case to the effect that a strike might, under certain circumstances, amount to a conspiracy at common law to molest, injure, or impoverish an individual, or to prevent him carrying on his business, led to the passing of 38 & 39 Vict. c. 86, which enacted that an agreement by two or more persons to do any act in furtherance of a trade dispute should not be indictable as a conspiracy if such act committed by one person should not be punishable as a crime, but the agreement remained actionable as a civil matter until the Trades Disputes Act 1906, c. 47, § 1. It is enough to support a charge of conspiracy that the agreement be one to an act which is unlawful or tortious, *e.g.* to bribe a public officer to act contrary to his duty, or a voter to vote contrary to his view of what is right and proper: Rex *v.* Whitaker (1914), 3 K.B. 1283.

In his scholarly monograph on the History of Conspiracy and Abuse of Legal Procedure (1921), Professor P. H. Winfield sketches the origin of the Writ of Conspiracy and concludes that the numerous judicial and other opinions to the effect that it was a common law writ, are ill-founded, and he attributes its origin to the Statute of Conspirators of 21 Edw. I. He says, "that combined wrong-doing needed much more attention from the law than individual offences is axiomatic." If in our own settled state of society "numbers may annoy and coerce where one may not (per Lord Lindley in *Quinn* v. *Leathem* (1901), A.C. p. 538), much more was this possible under monarchs whose government could scarcely cope with concerted oppression, and whose law in the hands of the wicked became more deadly to the innocent than to the guilty." The author says that in combinations to injure individuals otherwise than by fraud, it is doubtful whether the purpose need be, apart from combination, criminal.

An action for damages lies, as well as an indictment for unlawful conspiracy, and this may be brought by the person injured, against any one or more of the conspirators, who have no right to contribution from each other.

Laws of England, vol. xxvii. p. 489.

W. A. B.

CONSUL. Consuls are commercial agents appointed to reside in foreign countries for the purpose of protecting the individual interests of traders, travellers, and mariners belonging to the state which appoints them. A consul is not a diplomatic agent, and he is not therefore authorised, except in special cases, to make any representations to the government of the state in which he acts. He is not entitled to exemption from local jurisdiction, but enjoys certain specific privileges essential to the discharge of his duties, such as exemption from personal taxes and the inviolability of the papers of the consulate. The most important duties of consuls will be found in Hall's *International Law* (Oxford, 1880), and in the authorities there quoted. In eastern countries such as Turkey, China, and Japan, the subjects of western states are not liable to the local courts, and jurisdiction is by treaty exercised by consular courts. (See Consular Reports; also Consuls and Consular Reports, Appendix.)

[Phillimore's *International Law*, ii. § 272.—Calvo's *Droit International*, §§ 495-99.—*Handbuch des Völkerrechts herausgegeben von Dr. Franz von Holtzendorff*, vol. iii., Berlin, 1887.] J. E. C. M.

CONSULAR REPORTS.* The ability of the various representatives of the United Kingdom in foreign countries to supply information of great value to the trading community at home has long been recognised, and every secretary of embassy or legation, and every paid consular officer is therefore required to furnish an annual report on the trade, commerce, and navigation of the country or district, as the case may be, in which he is stationed. Secretaries of embassies or legations are also required to report annually on the finances of the countries in which they act. Reports on special subjects are occasionally called for, and information on commercial or industrial topics of special interest is frequently sent home by diplomatic and consular officers on their own motion.

In the course of the year 1886 some attention was given to the possibility of rendering these reports of greater practical value to the commercial classes, it being the opinion of many that foreign traders were better served in this respect than those of the United Kingdom. Some evidence to this effect was given before the royal commission on the depression of trade and industry, who referred to the subject in their report. It cannot be said that this contention was established, but the result of the investigation made by that commission and the foreign office was to effect some substantial improvements. It was arranged that the reports should be more promptly published, that the importance of procuring full information regarding the industry and the condition of the working classes should not be lost sight of, and that samples of the manufactured goods chiefly in demand in the countries in which consuls resided should be sent home with the reports. The reports are now utilised by the *Board of Trade Journal*.

[The *General Consular Instructions* and the *Correspondence respecting the Question of Diplomatic and Consular Assistance to British Trade Abroad*, published in 1886 (c. 4779), contain much information on this subject. An Index to the Reports published from 1886 to 1890 is also available (c. 6374).] T. H. E.

CONSUMABLES. See CONSUMPTIBLES.

CONSUMERS' GOODS (or CONSUMPTION GOODS) include all those desirable things which directly satisfy human needs and desires, *e.g.* food and clothing. Those desirable things which are only useful indirectly as a means towards the production of consumers' goods—as, for example, machines and the raw materials of manufacture—are by contrast spoken of as *Producers' Goods* (or *Production Goods*). This distinction has been carried further by Professor Menger and the Austrian school of economists, who divide goods into successive orders: *goods of the first order*, consisting of consumption goods as above defined; *goods of the second order*, of those things which contribute immediately towards the production of goods of the first order, *e.g.* sewing machines; *goods of the third order*, of those things which contribute similarly towards the production of goods of the second order, *e.g.* machinery used in the manufacture of sewing machines; and so on. In many cases it is impossible to draw a hard and fast line between goods of different orders, or even between consumers' goods and producers' goods; but this does not destroy the importance of the distinctions indicated. It may be observed that while some things are in their very nature consumers' goods or producers' goods as the case may be, *e.g.* ball dresses and sewing machines, others cannot be classified until the use to which they are put is known. For example, a horse may be used as a pleasure horse or for work on a farm; or, indeed, sometimes for the one purpose and sometimes for the other. A thing may even belong to several orders of goods at the same time; as, for example, a furnace which, while working machinery of various kinds, also serves to warm a neighbouring club-room or workmen's common room.

[Marshall, *Principles of Economics* (2nd ed.), bk. ii. ch. iii. § 1; and Sidgwick, *Principles of Political Economy*, bk. i. ch. iii. § 4 (see COMPLEMENTARY GOODS).] J. N. K.

CONSUMERS' RENT. A term introduced into the nomenclature of political economy by Professor Marshall, to designate the difference between the price that a purchaser actually pays for a given commodity and the price that he would be willing to pay rather than go without it. While the former can never exceed the latter, it is clear that, as regards a large portion of each individual's expenditure, the latter must exceed the former. This is proved by the fact that although a rise in the price of a commodity may lead a purchaser to buy less of it, he will not usually give up buying it altogether unless the rise in price is very considerable. Consumers' rent thus measures the surplus satisfaction that a consumer derives from the purchase of a commodity over and above the satisfaction that he sacrifices in paying away its price. In illustration, we may suppose the case of a man who, if the price of coals were £10 a ton, would just be induced to buy one ton annually; who would just be induced to buy two tons if the price were £7, three tons if it were £5, four tons if were £3, five tons if it were £2, six tons if it were £1 : 10s.; and who—the price being actually £1—does as a matter of fact buy seven tons. The fact that for one ton he would be willing to give £10 shows that the satisfaction he derives from that one ton is economically measured by £10. Hence the purchase of it for £1 yields a surplus satisfaction that is measured by £9; it yields, in other words, a consumers' rent of £9. Similarly the surplus satisfaction yielded by the whole amount of coal that he buys is measured by the difference between his actual expenditure on coal (£7) and the sum of the prices that he would just be willing to give for each successive ton, *i.e.* £29 : 10s. In other words, the whole consumers' rent that he derives from buying coal at £1 a ton is £22 : 10s.

The term *Consumers' Rent* is seen to be employed analogically: agricultural rent is the excess of the value of the total produce obtained from a given piece of land over what is required to remunerate the farmer for the outlay involved in raising the produce; consumers' rent is the excess of the money equivalent of the satisfaction derived by an individual from the total amount of a commodity that he purchases, as measured by the total price that he would, if necessary, be willing to give for it, over the outlay actually incurred.

Since the amount of satisfaction yielded to different purchasers by the same expenditure may be very different, it follows that a given consumers' rent may represent varying amounts of surplus satisfaction. In particular, the utilities of two commodities cannot be regarded as even approximately represented by their money measures, when one of the commodities is consumed chiefly by the rich and the other chiefly by the poor. Professor Marshall points out accordingly that the practical usefulness of estimates of consumers' rents is limited to those cases in which the prices taken into consideration are those paid in markets where the average wealth of the purchasers is equal.

The working out of problems that relate to consumers' rent is much facilitated by the employment of diagrammatic methods. The use of diagrams also indicates clearly the analogy between consumers' rent and rent in the ordinary sense.

[The above account of consumers' rent is taken

from a paper by Professor Marshall, on the *Pure Theory of (Domestic) Values*, printed for private circulation in 1879, and from the same author's *Principles of Economics*. For further explanation and for illustration of the uses to which the conception of consumers' rent may be put in economic discussions, and the limitations with which they must be received, see the last-named work, bk. iii. ch. iv., and bk. v. chs. vii. and viii.]

J. N. K.

CONSUMPTIBLES. A TERM EMPLOYED BY THE SCHOOLMEN. The schoolmen based a theory of interest on the distinction between "consumable" and "durable" goods. In the case of the former, the use of which is inseparable from and transferred with the article itself, interest was in their eyes wrong. The transfer of a consumptible, *e.g.* corn and wine, carries with it the right to consume. So to require the thing back, and also something for its use, is to charge two prices for it, one, a fair and proper equivalent, the other an extortion (see FUNGIBLES).

[Aquinas, *Summa Theologiæ*, II. ii. Q. 78, Art. 1.—Böhm-Bawerk, *Capital and Interest* (Eng. trans.), vol. i. ch. i. p. 22.] L. R. P.

CONSUMPTIBLES. The end of all production is consumption, and consumptibles are the individual material objects destined for, or capable of, consumption. This may follow after and extend over a longer or shorter period. The loaf which is eaten on the day of baking, the Suez Canal which will last, it is hoped, for centuries, are both consumptibles; they have this in common that they are destined to be consumed, and their destination is proved by the fact. But it is not necessary that the process even of consumption should begin at once on the completion of production. Consumptibles may be in stock an unlimited period before consumption begins without forfeiting the title. Thus the term covers the whole range of production, and includes all the products of industry. But it includes also a large number of other things. The gifts of nature, fruits, metals, animals, and also the forces of nature are all to be classed under the head of consumptibles. In some such cases the process even of consumption may not begin for centuries, and may continue for centuries more.

Consumptible and kindred terms would be by some restricted to articles that are desired for their own sake which are ends in themselves; goods of the *first* order, in Menger's phrase. In this sense a loaf is consumed, but not a machine. "Used up" has been proposed as a more general term than consumed. Another distinction is between commodities which in order to be useful must be used up, and those which, though in fact they do wear away, do not confer utility by being used up. A loaf belongs to the former class, the Suez Canal to the latter.

CONSUMPTION. Some economists have proposed to place consumption on the same footing as production, distribution, and exchange as a special department of economics. Since in England, however, this has not been attempted in the standard text-books, it seems best to indicate the various problems in the accepted divisions of the subject which would naturally fall under a department of consumption. It will be found that to a great extent the problems of the new department have been already investigated under other names.

(1) First of all come questions of definition and the explanation of the fundamental ideas at the basis of consumption, generally treated by English writers in connection with production. "Consumption," says Adam Smith, "is the sole end and purpose of all production, and the interest of the producer ought to be attended to only so far as it may be necessary for promoting that of the consumer." Later criticism has thrown doubt on the possibility of making such a sharp distinction between the interests of producers and consumers. Apart from women who are largely employed in domestic duties, and old men, invalids, and children, the number of those returned in the census of any civilised country as "unoccupied" is extremely small, and thus the great majority of the adult males are both producers and consumers. Accordingly the conditions as regards health, variety, moral and intellectual effects on the worker of the work done, etc., are of co-ordinate importance with the amount and quality of the definite commodities consumed. These questions are often discussed under the "disadvantages" of DIVISION OF LABOUR (*q.v.*), and sometimes under the effects of machinery.

The principal idea in consumption is utility, taken in the wide sense in which the term is used in ethics (utilitarianism); the characteristics of which were first analysed by Bentham. From the consumer's point of view the chief attribute of wealth is simply its utility—"its power or capacity," in Mill's language, "to satisfy a desire or serve a purpose." From this standpoint the fact that wealth requires land, labour, and capital for its production, that it may be distributed in different ways according to the laws of the state or so-called natural economic laws, and that it may be exchanged, are of secondary importance. The consumer looks primarily to utility. Thus if by some discovery of natural sources any commodity became so abundant as to lose altogether its exchange value, this would to the consumer be the best thing possible. Professor Jevons was the first to give full importance to utility as the foundation of consumption, and in this way the basis of economic science in general (*Theory of Political Economy*). Previous writers, as Mill, had been content with indicating broadly that utility was one requisite of exchange value. By the distinction between final and total utility (see UTILITY), Jevons threw a new light on the

whole subject. The utility obtained by the consumption of successive portions of any commodity is beyond a certain point subject to a species of diminishing return. The total utility of the things necessary to preserve life is very great, but the final utility of the last mouthful of bread and butter eaten by a well-fed labourer may be very small. The art of consumption, even without considering the limited powers of acquisition by an individual, consists in knowing when to leave off in one thing and to begin another. The ideal is reached when the final utilities of all the articles consumed are just equal. If everything were to be had in perfect abundance consumption would in each case be carried on until the zero point was reached, and further consumption would involve harmful excess or negative utility.

(2) The relation of consumption to production may next be noticed. The object of consumption is to obtain utility, but in general this can only be done by the destruction, at a more or less rapid rate, of the thing used. To replace this destruction, when the natural supplies are limited, is the object of production. This leads to the distinction between productive and unproductive consumption. The former may be defined strictly as that part of the producer's consumption which is necessary to keep up or increase his efficiency, whilst the remainder is unproductive. Thus it is impossible to separate the individuals who compose an industrial society into distinct classes of productive and unproductive consumers, for the great majority are both, though in different degrees.

Apart from this most general relation of consumption to production, we may consider the former as a stimulus to the latter. This is the principal point overlooked in Mill's unfortunately-worded proposition that demand for commodities is not demand for labour. It is the growth in the intensity and variety of the demands of consumers which is the mainspring of the increase of production, and thus of the employment of labour. This point has been forcibly illustrated by Adam Smith in his historical survey of the way in which the commerce of the towns contributed to the improvement of the country (*Wealth of Nations*, bk. iii. ch. iv.) Mill himself also observes (*Political Economy*, bk. i. ch. xiv.) that amongst the means of increasing the industrial activity of oriental nations must be reckoned "the growth of mental activity making the people alive to new objects of desire."

(3) Although in one way consumption through demand determines production, in another way production through the conditions of supply determines consumption. For the means at the disposal of any individual are limited, and in many cases give little surplus above what is required for the barest necessaries, and it follows that the price of the article is as important as its utility in determining the quantity consumed. The fundamental law of demand is that with every fall in price per unit, other things remaining the same, the number of units demanded increases. The consumer will aim at obtaining the maximum utility from the expenditure of the money at his command, and, to put the matter in the simplest form, a peck of apples may be of more use than a single pineapple. But the price of any article, not actually subject to natural or artificial scarcity or monopoly, depends normally upon Cost of Production (*q.v.*) Thus cost of production has an equal reciprocal influence on consumption. This is well illustrated in the case of food. The introduction of a cheaper means of subsistence often leads to the partial, or even total abandonment of a more costly, though in other respects superior national food, as, for example, was the case with the potato in Ireland. Again in the matter of clothing, the cheapness of the commodities produced on a large scale has driven out of use various home-made articles, *e.g.* stockings. The total result of this substitution of cheap and inferior articles may contribute towards lowering the standard of comfort of the mass of the people, and in this way the effect of production upon consumption may be most important.

(4) The connection between the distribution and the consumption of wealth is obviously of the closest kind, for the kind of articles selected by the consumer will depend upon the amount of his income. If all incomes were at the same level of moderate competence there would be no scope for the higher forms of luxuries, which require exclusive use for their enjoyment. Accordingly we find that socialists who aim at comparative equality of incomes lay great stress on all forms of social enjoyment, *e.g.* theatres, picture-galleries, music, etc. Again, historically, we find that the forms of wealth at different times have been largely determined by its distribution. The production of works of art in mediæval Italy, and game preserving in England, are examples of the mode in which consumption varies with the interests of dominant classes.

(5) The question of consumption may next be considered from the point of view of governmental control or *laissez-faire*. In former times almost every government thought it a most important part of its duty to lay down what various classes, or even individuals, might or might not consume, and we find sumptuary laws of the most detailed kind. In mediæval England, for example, both clothing and food were subject to the strictest regulations. A person must be of a certain social standing to be entitled to wear silk, or to eat more than three courses at a meal. In oriental countries this idea has reached its full development in

the caste system. In modern times in progressive societies the tendency has been in consumption, as in production, to rely more and more upon *laissez-faire*, although public opinion, distributed through different social orders, still exercises considerable influence, especially in matters of dress, houses, furniture, etc. In some respects, however, the government still exercises a direct or indirect control over consumption, and it is held to be justified in doing so in cases where the consumer is not the best judge of his own real interests, or of the real value of the article consumed. Thus in most countries the sale of intoxicants and the prescription of medicines have been placed under legal restraint. At the same time also laws with detailed provisions have been enacted against various forms of adulteration and fraud. The interests of consumers who are considered unfit to judge for themselves, *e.g.* children, have been specially considered. Indirectly government influences consumption mainly by taxation, and some taxes are advocated principally for their social effects (see TAXATION).

If the department of consumption ever assumes in the text-books a position of coordinate importance with the other departments, it might well be made to embrace various other topics at present scattered through different parts of economics.

Such, for example, is the question of the poor and poor-laws (see CHARITY, STATE), the advisability of protecting the limited natural resources of a nation, the necessity of considering the ultimate social effect of certain forms of trade which, for the time being, may be profitable (see FREE TRADE), and various questions on the distribution and inheritance of wealth, *e.g.* the effects on national consumption of a system of peasant proprietary.

(6) Lastly, the light thrown by the study of consumption upon social progress may be considered. Consumption being largely determined by distribution, is itself in turn one of the best signs of the way in which the national wealth is distributed. Statistics as to the consumption per head of various articles in different nations, or in the same nation at different times, often give the best evidence available on the wealth of various classes. In making such comparisons, however, regard must always be paid to a possible change or difference in tastes and habits, and also to the cost of the various articles considered, whether influenced by natural or governmental causes, and to the use of substitutes. A relative falling-off in the rate of the consumption of coffee may be due to an increase in the use of cocoa, and a decrease in the use of intoxicants may be ascribed, not to diminished consuming power, but to higher moral development. But when proper precautions are taken, statistics of consumption furnish a good outline of the material life of the mass of the people. The mere fact, for example, that so many articles are continuously produced on a larger scale shows, not only that they are consumed in increasing quantities, but also that larger numbers of people are able to purchase them, and thus the contention of the socialists that, through production on a large scale, wealth is being concentrated in a few hands, is shown to be an error, because the articles produced can only be consumed when spread over a wide area. In making comparisons of national progress from the consumer's standpoint, it would be most useful if index numbers based on the average consuming power of various classes were constructed (see INDEX NUMBERS).

[The subject of consumption is specially treated in Roscher's *Political Economy*, and in Schönberg's *Handbook*, by Professor Lexis. A useful development of Jevons's theory is given in Mr. Wicksteed's *Alphabet of Economic Science*; and in Mr. J. N. Keynes' *Scope and Method of Political Economy*, at p. 101 *et seq.*, there is an interesting discussion of the question whether the consumption of wealth should or should not be regarded as constituting a distinct department of political economy; with notices of numerous economists who have adopted this arrangement.] J. S. N.

CONSUMPTION, TAXES ON. The provision of an adequate revenue for the purposes of government has from the earliest times been effected, in part, by means of taxes on consumable articles. Adam Smith (*Wealth of Nations*, bk. v. ch. ii. art. iv.) ascribes the invention of such taxes to "the impossibility of taxing the people in proportion to their revenue by any capitation," but it would appear that the failure of direct imposts in mediæval times resulted in an increase and extension of a previously existing method of raising revenue, rather than in the institution of a system which is, in its essence, that of contribution in kind. Taxes on consumable commodities have been commended by economists on the ground of their convenience, it having been found possible by means of such taxes "to raise a considerable revenue . . . the payments of which by consumers are made in insensible portions, where it would have been impossible to collect the same amount by direct taxation at comparatively long intervals. Taxation is in this respect like bleeding" (Professor Nicholson, *Encyclopædia Britannica*, 9th ed., art. "Taxation"). It has also been urged in favour of this system of taxation that it may be assessed so as to leave no doubt concerning what ought to be paid, or when it ought to be paid, and Montesquieu (*Esprit des Lois*, liv. xii. cap. vii.) says in favour of taxes on commodities that they "are felt the least by the people because no formal demand is made for them. They can be so wisely contrived that the people shall scarcely know that they pay them." On the other

hand, while Ricardo affirms that a tax on necessaries will not be borne by the working classes (*Principles of Political Economy*, ch. xvi.), Adam Smith distinguishes between the effect of taxes on necessaries and on luxuries, observing (*Wealth of Nations*, bk. v. ch. ii. art. iv.) that in the former case the tax will eventually be shifted to other shoulders than those of the immediate consumer. M'Culloch adds that the process by which this is brought about is slow and difficult, and that "there is in most cases a great risk in imposing or increasing taxes on necessaries, lest the wages of labour should not sustain a corresponding rise, and the condition of the labourers be in consequence depressed." Professor Sidgwick emphasises the fact that the taxation of commodities is "incompatible with any very exact equalisation of the burden of taxation," but he adds that the system has "the merit of avoiding the worst inequalities which taxation proportioned to income would cause . . . since it enables those persons whose needs are greatest to diminish their share of taxation by abstinence from customary luxuries" (*Principles of Political Economy*, 1883, pp. 565, 566).

It is generally believed, with Adam Smith, that taxes on commodities take out or keep out of the pockets of the people more than almost any other taxes, in proportion to what they bring in to the state, although it may be doubted whether, under a well-ordered tariff and modern administration, any serious objection arises under this head (see COST OF COLLECTION OF TAXES).

Taxes on commodities have also been resorted to for other purposes than the provision of revenue, *e.g.* the discouragement of the consumption of intoxicating liquors, and the protection or encouragement of home industries by means of the imposition of duties either on imported foreign manufactures or on raw materials sent abroad (see PROTECTION). Such taxes may be levied either by the collection of a duty from the importer, producer, or manufacturer, in which case it is usual where the duty is at all heavy to permit the dutiable articles to be warehoused under the supervision of the revenue officers until such time as delivery for consumption takes place, or by the collection of an annual licence duty from the person using the article, as in the case of carriages and guns. The imposition of a licence duty in respect of the manufacture of or dealing in certain articles has practically the same effect as a duty on the articles themselves.

As to the incidence of duties on commodities, the summary of opinion given by Professor Nicholson in the article above referred to may be cited: "Where production takes place under free competition, the tax will, owing to the tendency of profits to equality, be transferred to the consumer, but when the article is practically monopolised, a tax must fall on the monopolist." For a more minute discussion of these cases, see Pantaleoni, *Theoria della pressione tributaria*, and Cournot, *Recherches*, ch. vi.

The majority of the leading treatises on political economy specifically deal with this subject (see also CUSTOM, CUSTOMS DUTIES; EXCISE). T. H. E.

CONTINUATION OR CONTANGO. Under the word BACKWARDATION (*q.v.*) the process by which a person who, being unable to deliver stock which he has sold, borrows it, has been already described. In the same way, one who has bought stock or shares which he cannot pay for is obliged to borrow the money, and this he can often do from the person who has sold the stock or securities in question. But the seller charges him a "contango." Under normal circumstances the contango, or rate of continuation, somewhat exceeds the ordinary rate of interest at which money can be borrowed from the banks, for the banks do not lend to the full market-value of the securities lodged with them, whereas one who "contangoes" retains securities to the bare amount of his loan, and has no claim until the next settling day against the person whom he trusted to fulfil the bargain. A great deal of business is done by money-dealers, who borrow at a low rate and re-lend on the stock exchange in this way. A. E.

CONTINENTAL SYSTEM. The great war from 1803 to 1814 was primarily a duel between France and England, in which the other powers of Europe were engaged, sometimes on one side, sometimes on the other. But the war had this peculiar characteristic, that neither of the two chief belligerents could attack each other directly. The battle of Austerlitz annihilated the coalition which Pitt had formed, and secured the supremacy of Napoleon on the mainland. Almost at the same time Nelson's victory at Trafalgar destroyed the naval power of France, and put an end to all ideas of invading England. Thus the two states were forced to fall back upon indirect modes of warfare, and each sought to cripple the other's commerce. The measures adopted by Napoleon for this purpose in his famous decrees from Berlin and Milan have received the name of the "continental system." England retaliated by a series of orders in council, of which the two most important were issued in 1807.

There was no novelty in the questions raised or the means adopted in this war, except the vast scale on which mercantile hostilities were carried on. In all the wars of the 18th century England had sought to cut off France from commerce with its colonies. The result had been to throw this trade into the hands of neutral powers. To prevent this, England had laid down the rule of 1756, that a neutral had no right to relieve a belligerent by carrying on a trade in time of war, from which it would be

excluded during peace. The harshness with which England employed its maritime ascendency to enforce this rule induced the states of northern Europe to conclude an ARMED NEUTRALITY (*q.v.*) in 1780, and again in 1800. The principles which they asserted were that "free ships make free goods," that a neutral may carry any commodities, except such as are contraband of war, and that a blockade can only be respected when it is effectual.

The essential difficulty of measures against the commerce of an enemy was that they must necessarily affect the interests of neutral states. This difficulty became very prominent in the war with Napoleon. On 16th May 1806, the Whig ministry in England notified to the ministers of neutral powers that the whole coast from the Elbe to Brest was blockaded against the introduction of contraband of war or of goods belonging to the enemies of England, while the coast from Ostend to the Seine was subject to a rigorous blockade. This measure gave Napoleon a pretext for issuing the Berlin decree on 21st November 1806. The preamble asserted that England had violated the law of nations: (1) by extending to private property on sea a right of capture which on land only applies to property of the state; (2) by extending to unfortified towns and ports a right of blockade which is only applicable to fortified places; (3) by declaring blockaded places before which there is not a single vessel, and "places which all the united forces would be incapable of blockading, such as entire coasts and a whole empire." On these grounds he decrees that—(1) the British Islands are in a state of blockade; (2) all commerce with them is prohibited; (3) every English subject in countries occupied by French troops, or those of their allies, will be made prisoners of war; (4) all property of an English subject is lawful prize; (5) all merchandise belonging to England, or obtained from her manufactories or colonies, is lawful prize; (6) no ship coming direct from England or English colonies shall be received in any port.

This measure went far beyond anything which England had ever attempted, and was the more preposterous as France had no naval power by which it could be enforced. Probably the wisest course for England would have been to leave France to meet the discontent of her subjects and allies, and the hostility of neutral states, of which the United States were the most important. In that case the Berlin decree would almost certainly have been a dead letter. But if the continental system owed its origin to the action of France, it owed its efficiency to the action of England. Without waiting to see what attitude would be assumed by neutrals, the Whig government issued an order in council on 7th January 1807. After reciting the purport of the Berlin decree, it ordered that no vessel should be allowed to trade between one port and another belonging to France or her allies; that neutral vessels attempting such a voyage should be warned by English men-of-war and privateers; and that if they disregarded the warning, they should be captured as lawful prize. This order failed in its avowed object of compelling France to withdraw the decree, or inducing neutral states to insist on its withdrawal. On the contrary English goods in the north of Europe were rigorously confiscated by French troops. Meanwhile the Whig ministry fell, and the Tories, who succeeded to office under the duke of Portland, issued a second and far more stringent order in council, on 11th November 1807. This decreed that all ports belonging to France or her allies, or to any country from which the British flag was excluded, should be regarded as in a state of blockade; that all trade in articles produced in such countries should be condemned as unlawful; and that every vessel trading from or to such countries, or carrying their produce, should be captured as lawful prize.

Napoleon promptly answered this order by the Milan decree, 17th December 1807. Its chief provisions were as follows:—Every ship of any nation which submits to the order of 11th November is declared denationalised, and considered as British property; (2) the British Isles are declared in a state of blockade "by sea as well as by land." Every ship going to or from a port of England or English colonies is declared to be good prize; (3) these measures shall "continue to be in force until the British government returns to the principles of the law of nations, which regulates the relations of civilised states in time of war."

Thus the continental system, carried to its logical extreme by both the two great belligerents, threatened to put a stop to the commerce of the whole world. It was of course impossible to enforce with absolute strictness the provisions either of Napoleon's decrees or of the English orders. A vast system of smuggling was the inevitable result, and goods were carried to the blockaded ports, though their price was necessarily enhanced by the comparative scantiness of the supply, and by the risks run in conducting the trade. Perhaps the most curious thing is that this smuggling was connived at, and made a source of revenue, by the two states who were responsible for the prohibitions. Both England and France issued licenses for the evasion of their respective decrees. Napoleon is said to have amassed by their sale the sum of 400,000,000 francs; while in England the number of commercial licenses mounted from 791 in 1805 to 18,356 in 1810.

Although thus limited by licensed and unlicensed evasions, the results of the continental

system can hardly be over-estimated. It was a principal cause of the ultimate fall of Napoleon. To render the system efficient and complete he must make himself master of the whole of Europe. This impelled him to those enterprises in Portugal and Spain, and especially to the great expedition to Russia, which contributed essentially to ruin his power. And again the sufferings caused among the peoples of Europe by the scarcity and dearness of commodities which they had learnt to regard as necessaries excited a discontent against French domination which had not existed at the beginning of the revolutionary conquests. The French had always professed to be the enemies of dynasties but the friends of the people, and their professions had long been believed. The continental system destroyed that belief, and the Napoleonic empire fell before the popular hostility which his measures against England had excited.

With regard to England, the policy or impolicy of the orders in council was hotly debated at the time, and can hardly yet be regarded as a matter on which opinion is absolutely formed. That they did in the end serve their purpose as measures of hostility against Napoleon is absolutely demonstrable. But they did this at considerable cost. In the first place they inflicted enormous hardships upon English manufacturers, who were to a great extent deprived of the market for their produce. No doubt these hardships were lessened by the system of licenses, but this in itself is indefensible on any principles of commercial morality. The almost unanimous petitions from the chief manufacturing towns prove that they had undoubted grievances to complain of, and that these were, to a great extent, due to the policy of the government.

But the most harmful result to England was undoubtedly the quarrel with the United States. It was inevitable that the enmity of neutrals should be directed less against the state which originated the continental system than against that which had the power to enforce it. In 1808 Congress passed an act of embargo, prohibiting all intercourse with England and France as long as the two countries maintained their decrees. In the hope of conciliating the last great power which was not hostile, England modified the orders in council in April 1809, by opening to American vessels the Baltic, the North Sea, part of Italy, and the foreign possessions of the Dutch. But the quarrel was not healed, and it was further aggravated by disputes arising from the English claim to search American vessels for deserters from the navy. To make matters worse, Napoleon offered to withdraw his decrees, on condition that England should revoke the orders in council and abandon "the new principles of blockade which they had laid down." To this the English ministers would not agree and at the end of 1810 the American ambassador quitted England.

The loss of the American market, and the prospect of a quarrel with the United States, increased the ill-feeling in England against the orders. The Whigs, who were responsible for the policy in its origin, now turned round and denounced it. At last, in 1812, Brougham carried a motion in the Commons for an inquiry before a committee of the whole house. The evidence was almost conclusive, and after a one-sided debate, the government avoided a division by announcing that the orders would be abandoned. They were repealed by an order of 23rd June 1812. But it was too late to avoid the war with America, which lasted for two years with little credit to either country, and was terminated by the treaty of Ghent in 1814. (See BLOCKADE; INTERNATIONAL LAW; PAPER BLOCKADE.)

[The Berlin and Milan decrees will be found in the *Moniteur*: the orders in council in the *London Gazette*. They are quoted *in extenso* by Leone Levi, *History of British Commerce*, part ii. ch. iv., Appendix.—See also Alison, *History of Europe*, vol. viii. ch. l.—*Life and Times of Lord Brougham*, by himself, vol. ii. ch x., and *Speeches*, vol. i.—Spencer Walpole, *Life of the Right Hon. Spencer Perceval*, vol. ii. ch. viii.—For the fullest criticism of the policy of the orders in council, see Hansard, *Parliamentary Debates, sub. ann.*, 1812.] R. L.

CONTRABAND. The term was first used in the 16th century to denote goods imported or exported contrary to law or proclamation—*bando*. In this sense it appears in many 17th century treaties. It was also applied almost contemporaneously to goods forbidden to be supplied to belligerents in time of war and which were liable by international law to be captured and confiscated by belligerents. The test was whether the goods were necessaries of war. This formed the basis of the classification as developed by the British and American Prize Courts. In the *Peterhof*, 5 Wall. 28 (1866), Chase, J.C., said merchandise might be divided into three classes. Of these the first consisted of articles manufactured and primarily used for military purposes in time of war; the second of articles which might be and were used for purposes of war or peace, according to circumstances; and the third of articles exclusively used for peaceful purposes. Merchandise of the first class destined to a belligerent country or places occupied by the army or navy of a belligerent was always contraband; merchandise of the second class was contraband only when destined to the military or naval use of a belligerent, or to a place of naval or military equipment belonging to or occupied by him; whilst merchandise of the third class was not contraband at all, although liable to seizure and condemnation for breach of blockade. To

the first class has been given the title of "absolute contraband"; to the second that of "conditional" or "occasional contraband"—*ancipitis usus*; whilst articles of the third are styled "free."

A Government might, however, extend or restrict the list of absolute and conditional contraband, subject to restrictions imposed by treaty or international law. The inclusion of articles in the list of conditional contraband was mitigated in the case of Great Britain by the practice of pre-emption. With this Anglo-American doctrine Japan substantially agreed. Continental opinion was generally opposed to the doctrine of conditional contraband, although there were two schools. One sought to limit contraband to articles of immediate warlike use; the other, whilst recognising the principle of variability, to confine it within the narrowest limits. In practice, however, especially when belligerents, Continental States adopted rules even more stringent than the British. Thus France in 1885 claimed to treat rice bound for ports north of Canton as contraband; Spain in 1898 claimed to declare contraband any articles she chose; whilst Russia in 1904 declared food-stuffs, coal, and raw cotton to be contraband, irrespective of any proof of military destination.

Under the customary law, therefore, the only points on which there was any general agreement were that goods in order to be liable to confiscation as contraband must be of a nature to assist the enemy in war, and must have a hostile destination. After an abortive attempt at The Hague in 1907, agreement was reached by the Naval Conference 1908-9. (See DECLARATION OF LONDON.)

As stated, the term "contraband" is applied to goods which are imported or exported contrary to the revenue laws. The Customs Laws Consolidation Act 1876 (39 & 40 Vict. c. 36, s. 177) provides that if goods liable to the payment of duties shall be unshipped, or if prohibited goods are imported, or if any goods are removed from any ship, quay, etc., or warehouse, or if any goods prohibited to be exported are shipped for exportation, or if any goods are concealed on any vessel in port, without having paid duty, they shall be forfeited. By s. 179, amended by 53 & 54 Vict. c. 56, any vessel of or exceeding 250 tons, if belonging in whole or in part to British subjects, arriving within the United Kingdom or within three leagues thereof, or if not British within one league, having prohibited goods on board, shall be forfeited. If the vessel is under 250 tons a fine of not more than £50 may be imposed.

[Hall's *International Law*, 7th ed., by Pearce Higgins, 1917.—Pitt-Cobbett's *Leading Cases on International Law*, 4th ed., by Bellot, 1924.]

H. H. L. B.

CONTRACT. The origin of contracts must be co-eval with the first commencement of economic relations among mankind. The simplest actions of daily life, even amongst the least civilised communities, are really forms of contract. Exchange and barter, the earliest and crudest outcome of the law of supply and demand, is essentially a contract. The man who can make a rude plough finds himself, by the possession of that faculty, independent of the necessity of engaging directly in agricultural pursuits to obtain a share of the fruits of the earth. This elementary example will suffice to demonstrate the primary bearing of the doctrine of contracts on economic questions. For even in this there is traceable one of the great and fundamental principles of contract in its relation to political economy, namely, the power it bestows of obtaining at once a personal benefit, through entering into an engagement ultimately to discharge the original obligation. In more advanced conditions of society, the principle assumes more extended development; landowners lease land to farmers possessing skill and capacity requisite to till that land to advantage, capitalists advance money to merchants to be employed in trade to produce profits exceeding the rate of interest demanded, but the principle is still the same. It is obvious that to induce a man to entrust his property to another, to part with his present enjoyment and use of it for the sake of future advantage, the certainty of that future advantage must be secured to him, he must have a hold over the person to whom he has entrusted it, he must, to carry on his business and arrange fresh combinations, be able to reckon with confidence upon the return to him of his capital, together with the increment which is the result of its temporary alienation. It is the establishment of this confidence, the basis of any system of credit, which is the aim and object of the law of contracts. The methods by which the law seeks to attain this security are various. For two objects, apt to clash, have to be borne in mind. On the one hand, that of ensuring performance of, inspiring confidence in, the fulfilment of the contract; on the other, that of encouraging the freedom of contract by attaching thereto such safeguards that persons may readily bind themselves, knowing that the law will protect them, and that precautionary measures exist which will prevent undue advantage being taken of ignorance, necessity, inadvertence, want of proper advice, or lapse of time; and that fraud, if it exists, will invalidate any contract, however formal and solemn. To turn to concrete examples. Among the first class, or what may be termed the promisee's safeguards, may be enumerated the rules by which money due or liquidated demands under a contract can be recovered by speedy and economical process, such as that provided by Order XIV. of the

rules of the Supreme Court, which practically casts the onus of proving non-liability on the defendant, and the procedure which amerces damages, assumed to be commensurate with the injury directly or reasonably referable to the breach of the contract, or where such damages afford no sufficient reparation, specific performance of the contract itself. The other class, which may be termed the promisor's protection, comprises enactments, such as the statute of limitations, which requires that actions on contracts should be brought within such period as to render it probable that witnesses who can speak to what really took place may be still available; the statute of Frauds, rendering writing necessary for proof of contracts attaining a certain degree of importance or extending over a specified period; the whole doctrine of the limitation of the contractual powers of infants and married women, the equitable rules which will in fitting cases set aside or modify unconscionable bargains with reversioners or persons whose immediate and pressing needs impair their liberty of action, and finally the great principle that fraud invalidates everything.

In certain exceptional cases the legislature goes even further than this, and adopts a course which must always be open to criticism and discussion. It passes an act to benefit a particular class, such for instance as the Agricultural Holdings Act of 1883, or the Ground Game Act of 1880, and then provides that it shall not be competent for any member of the class intended to be benefited to contract himself out of the act. How far this interference with freedom of contract is justified must always be an open question. It is never permissible save in the interest of a class admittedly improvident or prone to sacrifice future advantage for immediate gratification, such for example as sailors. But even in such cases, members of the class intended to be benefited must occasionally lose good opportunities by reason of the fetters so imposed on their contracting powers. Take the case of a farmer willing to take a farm at a lower rent if he could renounce the benefit of the Ground Game Act, having no inclination to avail himself of the sporting reservation it ensures him, and possessing a well-founded confidence that his landlord, from his own tastes and interests, to say nothing of his regard for an obligation assumed, would never permit ground game to increase to the prejudice of the tenant's occupation of the farm. It certainly seems hard that the parties should not be permitted to regulate their relations in accordance with their own wishes and their mutual interests. But the justification of such measures is to be found, if at all, in the general interest of the community and the welfare of the class specially concerned, and for one case where the rule might probably be relaxed with advantage, there would be many where the deviation would produce ultimate disadvantage to one party. Some instances of legislative interference with freedom of contract seem, however, to be entirely beneficial, such for instance as the Truck Acts, and the legislation respecting the employment of women and children in mines and factories. (see CHILDREN'S LABOUR, and FACTORY ACTS.) An interference with contracts, frequently unjustifiable, is that of *ex post facto* legislation, enactments which set aside or modify existing contracts, not on the ground of any inherent disability or irregularity existing at the time the contract was entered into, not on any suggestion that the parties were not of competent and freely consenting mind when they contracted, or that the contract was in any way tainted with fraud, but on the plea that since that date circumstances have altered, that something has supervened which renders it equitable or desirable that its terms should be reconsidered or readjusted without the consent of at least one of the parties thereto. Whether such circumstances exist or not in any particular case, or whatever estimate may be made of the justice or the policy of such a measure, appears altogether outside the economic questions involved. If good is done in any particular case, the benefit is immeasurably outweighed by the danger of the precedent, by the general sense of insecurity induced, and the shock to confidence in the sanctity of contract occasioned thereby. Instances are not far to seek. Irish rents in recent times, and commercial obligations in France during the stress of the Franco-German war, have been the subject of this sort of *ex post facto* legislation, and however widely opinions may differ as to the degree of justification afforded in each case by the exigencies of the situation, the precedent cannot from an economic point of view be regarded as otherwise than dangerous. Such legislation has been likened to a convulsion of nature which by destroying the subject matter of a contract renders the fulfilment thereof impossible and takes away in ordinary cases any right to damages for the breach; and the simile indicates the legal attitude towards exceptional measures of this nature. A question of mixed economics and law in relation to contract which is at present taking definite and practical form is how far the law will intervene to limit combinations which, having as their objects the attainment of complete or partial monopolies and the elimination of healthy competition, may tend to enhance the price of articles of daily necessity, to the benefit of the few and the prejudice of the many. Contracts made with a view to such an end may be declared void as between the parties both in this country and in America, but community of interest secures adherence to the terms of such contracts and the remedy, if any, must be brought to bear from outside. As stated by Lord Coleridge in the recent case of the Mogul Steamship Company, Limited,

v. M'Gregor, Gow, and Co., 21, Q.B.D., 544, in a judgment affirmed by the H. of L. (92) Appeal Cases 25, the line which separates the reasonable selfishness of traders from wrong and malice is one difficult to draw in words. But the law of conspiracy is very untrammelled and general in its operation, embracing in its widest definition any combination of two or more persons for the accomplishment of anything which in the opinion of the court is detrimental to the public welfare, and it will probably come to be judicially settled before long how far salt unions, flour and coal unions, and the whole development of the ring system, fall within the scope of the criminal law under this head.

The intervention of bankruptcy law to preclude the full enforcement of contracts stands on a different footing (see BANKRUPTCY LAW). The possibility of bankruptcy is always a remote potential incident of every contract, from the inception of which it must be taken to have been in the contemplation of the parties and accepted by them; moreover, the obloquy and disabilities involved by becoming bankrupt, coupled with the necessary surrender of all existing, and until discharge, all accruing, property constitute a sufficient deterrent and punishment to warrant an interference which is after all more in the interest of the body of creditors than of the bankrupt.

Confidence in the fulfilment of contracts renders possible the replacement of a very large proportion of the circulating medium of a country by the employment of paper to represent the gold or silver which would otherwise be required. Bank-notes are merely contracts to pay, yet the firm belief in the validity of the contract supports a circulation adequate for the wants of the country, with the assistance only of coin representing a comparatively small proportion of the outstanding liability, and so with bills and promissory notes; though only contracts, yet, backed by the credit of the parties to them, they take, during their currency, the place of coin.

So again, the entire fabric of legitimate co-operation and combination, of partnerships, the utilisation of capital and organisation of labour, would be impossible were it not for the doctrine of contracts and its practical availability. A firm of contractors, themselves bound by contract to unite their energies and capital, or deriving that capital from others by means of contract, undertake under contract important works for a body of persons who again, as a company, combine their capital under the provisions of a contract of association, the contractors make subcontracts with managers, foremen, and workmen for their respective services, with producers, carriers, shipowners, and manufacturers for the supply and carriage of the requisite materials and plant, other contracts are entered into with landowners for the site to be occupied, and so by the intervention of a series of contracts, an enterprise is carried through which would be absolutely impossible without such machinery. Employment is found directly or indirectly for a large number of persons, and money is put into circulation through the most remunerative and beneficial channels.

As we have seen that the principle of contract helped to supply the simplest wants of early economic society, so it keeps pace and expands with the increasing needs of advancing civilisation. By an inherent power of development, without any moving cause other than men's recognition of its necessity and appreciation of its efficacy, it rises to every fresh occasion, and almost insensibly permeates daily life to the welfare and progress of society at large.[1]

[Addison on *Contracts*.—Chitty on *Contracts*.—Pollock's *Law of Contracts*.—Anson on *Contracts*.]

J. R. P.

CONTRACT, LAW OF. A contract is a legally binding promise made by one or more persons to another person or other persons, to do some act, to forbear from some act, or to suffer some act to be done, for the benefit of such other person or persons. Such a promise, whether legally binding or not, is called an agreement, and an agreement becomes a contract if the following requirements are complied with: (1) the promise must be intended to create a legal relation between the parties (*e.g.* a promise to dine at a friend's house is not a contract); (2) the parties must be capable of contracting (*e.g.* the agreements of infants and lunatics are mostly invalid, and a married woman having no separate estate cannot bind herself); (3) the contents of the agreement must have been submitted by the one side to the other (offer), and must have been assented to by the latter in an unambiguous and unqualified manner (acceptance); (4) the agreement must not be entered into for an unlawful or immoral object (*e.g.* an agreement not to exercise a certain trade without any limit as to space is invalid, as being in general restraint of trade, and therefore against public policy; an agreement to commit an indictable offence is similarly void, and there are numerous other instances); (5) the contract must either be made by deed (*i.e.* signed, sealed, and delivered by the promising party or parties), or it must be supported by a "valuable consideration."

A contract made by deed is called a contract under seal or a specialty; contracts not made by deed may be written contracts or parol contracts. A valuable consideration may consist in a benefit accruing to the promising party or in a sacrifice made by the party to whom the promise is made, in exchange for the promise.

[1] Montesquieu's story of the Troglodytes forcibly illustrates the dissolution of society through breach of contract.

If, for instance, A by contract under seal promises to B to pay him £500 on a given day by way of gift, B will succeed in an action against A if A fails to pay at such date. If, on the other hand, the same promise be made by writing without seal, B has no remedy in case of non-performance. If, however, A, by word of mouth, promises B to pay him £500 in two days in consideration of B lending him a book for two hours, there will be an enforceable contract, as the adequacy of the consideration is not inquired into except in so far as it might be evidence of fraud.

An agreement which satisfies the above-mentioned requirements is called a contract; if, on the other hand, any one of the requirements is not complied with, the transaction remains without any legal effect, and the agreement is called "void." Void agreements must be distinguished from unenforceable and voidable contracts.

Certain classes of contracts are not enforceable in the absence of written evidence as to their contents, the following being the most important:—

(1) Under § 4 of the Statute of Frauds (29 Car. II. c. 3).

(*a*) Contracts by which an executor or administrator assumes personal liability for debts owing to the estate administered by him. (*b*) Contracts of guarantee. (*c*) Contracts made in consideration of marriage. (*d*) Contracts for the sale or purchase of land or of any interest in land. (*e*) Contracts not to be performed within a year from the date on which they are made.

(2) Under § 17 of the same statute.

Contracts for the sale of goods at the price of £10 or at any higher price, unless the goods have been partly accepted and received by the buyer, or have been partly paid for by the same.

(3) Contracts arising on bills of exchange.

(4) Contracts of marine insurance, etc.

The requirement of writing in these cases does not affect the validity of the contract; only so long as no written evidence exists the contract cannot be proved in a court of law; but written evidence dated from a time subsequent to the date of the contract, if otherwise in order, is quite sufficient.

A "voidable" contract is one which may be rescinded by one of the parties, unless such party, after having become aware of the circumstances which make the continuance of the contract depend on his option, by his conduct or by express words shows that he intends to abide by the agreement. Thus, for instance, a contract induced by fraud or undue influence is voidable at the option of the defrauded or intimidated party.

The usual remedy for breach of contract is an action for damages; the party who suffers loss in consequence of such breach is entitled to receive compensation in money from the party who failed to perform the contract. He is "as far as money can do it to be placed in the same situation as if the contract had been performed." The causal connection between the non-performance and the loss must, however, not be too remote, and the loss must be of such a description as might reasonably have been contemplated by the parties when entering into the contract. Thus a person who sends some machinery for repair through a carrier who fails to deliver it in proper time cannot claim compensation for the loss of trade arising through the delay in the receipt of the repaired machinery. If, however, a carrier undertakes to carry goods which to his knowledge were meant to be sold at a particular time, he is liable for the damage done by loss of market arising from a delayed delivery. In actions for non-payment of a debt nothing more than the sum due could be recovered formerly, unless there was an express promise to pay interest; it is now provided by 3 & 4 William IV. c. 42, §§ 28, 29, that in the case of a debt payable by virtue of a written instrument interest at the current rate may be allowed on neglect to pay after a written demand.

The practice of the Court of Chancery has provided a remedy, in cases where money is no adequate compensation for a breach of contract, in the shape of an order for specific performance. This remedy is, however, available only to a very limited extent, the most conspicuous instances being contracts for the sale of land, and even in the case of a contract which, according to the nature of its subject matter, might be specifically enforced, the court will not grant a decree unless certain requirements are complied with, one of the requirements being valuable consideration, which for the purpose of specific enforcement must exist in a contract under seal as well as in a simple contract. E. S.

CONTRACT NOTE. The writing on these documents is a short and formal announcement that a stockbroker has bought or sold for his principal a given amount of stock, bonds, or shares at specified prices, to which is added brokerage and a stamp, which Mr. Goschen raised to 6d., on each contract note for more than £100, but which, before 1888, used always to be 1d. Contracts do not pass between members of the stock exchange. It is a rule that every bargain between members should be checked by 11 A.M. on the following day; and the committee will not listen to any dispute if this be neglected. A. E.

CONTRACTORS. Persons who are parties to a contract. The name is more specially applied to persons who make it a regular business to undertake large works (*e.g.* the construction of railways, bridges, or buildings) for sums fixed beforehand. E. S.

CONTRACTUS TRINUS. See ECK, JOHANN.

CONTRIBUTION, CONTRIBUTORY. See COMPANY.

CONVENTION OF ROYAL BURGHS OF SCOTLAND. This municipal federation originated in the court or parliament of four burghs, which consisted of representatives from Edinburgh, Stirling, Berwick, and Roxburgh. In 1368 Lanark and Linlithgow were substituted for Berwick and Roxburgh. In the 13th and 14th centuries this court, with the chamberlain of Scotland as presiding officer, exercised a general supervision over the burghs of the kingdom, legislating for them, and acting as their high court of appeal. The transition from the old parliament or court of four burghs to the modern convention of royal burghs seems to have taken place gradually during the 15th century. Already, in 1405, the process of transformation is perceptible. In this year the court of four burghs enacted that two or three burgesses from each of the king's burghs, south of the Spey, should assemble annually to treat and ordain concerning all things that relate to the well-being, liberties, and court of the king's burghs. The name "convention" gradually superseded "court" and "parliament" in the first half of the 16th century.

The most important member of the league was Edinburgh, which sent two commissioners to the meetings of the convention, while the other royal burghs usually sent only one. Edinburgh was also generally selected as the seat of the convention. But the place and time of meeting varied. As a rule, the commissioners assembled annually. The presiding officer, elected at each session, was called the moderator. He was generally the commissioner of the town where the meeting was held, or, if there were two commissioners, the senior delegate. A committee of representatives of various burghs was often appointed to transact urgent business while the convention was not sitting.

The chief function of the convention was the supervision of trade, domestic and foreign. It made regulations concerning markets, tolls, fisheries, manufactures, customs-duties, shipping, imports and exports, etc. It negotiated commercial treaties with continental states and cities. It exercised control over Scotch merchants in France, Flanders, and other countries of Europe. The chief foreign trade of Scotland was carried on with the Netherlands, and was monopolised by the royal burghs. This trade was regulated through "the conservator of the Scotch privileges in the Netherlands." He was elected by the convention, though the king sometimes claimed and exercised the right of appointment. The conservator lived in the Scotch staple-town, usually Campvere (the modern Vere in the province of Zealand), where the royal burghs enjoyed important privileges. He had general charge of Scotch merchants and factors in the Netherlands, and was the judge of the conservatory court, which tried all civil and criminal cases concerning Scotsmen. The "lord" conservator was himself guided by the instructions and orders of the convention. At Campvere there was, moreover, a "consergerie," where the Scotch merchants lodged and took their meals. The master of the consergerie was expected to enforce many minute regulations, some of which were peculiar. In the staple-town we also find a Scotch school, kirk, and prison-house. The convention carefully regulated everything relating to these various institutions, including even the wearing apparel of merchants and the price of their meals.

Besides the supervision of commerce, this powerful organisation exercised important functions in connection with national taxation. It apportioned public taxes among the burghs. It also sometimes made loans and grants of money to the king.

A third important function of the convention was the oversight of the internal administration of royal burghs. It took cognisance of weights and measures; altered the "setts" or written constitutions of towns; decided controversies between burghs, or between burghs and their magistrates; and regulated the election of municipal officers, the qualifications of burgessship, the finances, etc., of towns. It also often appropriated money for the repair of harbours, and for the general improvement of particular burghs.

The federation is still in existence, but its most important functions have been absorbed by parliament. Its meetings are held annually at Edinburgh, which is represented by two commissioners and two assessors, while the other burghs send one commissioner and one assessor. The larger towns have cause for complaint owing to the inequality of representation. The convention now merely makes suggestions and recommendations concerning commerce and municipal affairs, for the purpose of influencing public opinion and parliamentary action. It used to exert great influence upon national legislation.

[This account is based upon the *Acts of the Parliament of Scotland* (12 vols., 1814-1875), and especially upon the *Records of the Convention of Royal Burghs*, edited by J. D. Marwick (6 vols., Edinburgh, 1866-90). These *Records* form a rich, unworked mine of information for historians and economists. There is no good history of the convention.—John Mackay's *Convention of the Royal Burghs of Scotland* to 1707 (Edinburgh, 1884) is a very brief and fragmentary account. The subject is worthy of more attention than it has thus far received.] C. Gr.

CONVENTIONAL TARIFF. This term is applicable to regulations, of a more or less arbitrary or empirical kind, giving a fixed value of conversion from one currency to another, in which the exact intrinsic value or

unit par of exchange is disregarded. Thus, the English sovereign in Portugal has a legal conventional tariff value of 53⅓ pence per milreis of her own gold coinage, although the pure gold value of the latter is only 53·284 pence. Then again, in international postal conventions between England and a great group of other countries, similar fractional differences are allowed to be, so to speak, glossed over. For example, ten centimes and one penny are to an enormous extent taken as identical. But one penny, as the two hundred and fortieth part of a gold sovereign, has about ·00417 of its value, whilst ten centimes have only about ·00396. This is tantamount to depreciating English currency to the extent of more than 5 per cent of its real value. In the practical result, the British public has been unduly generous and quixotically lavish in letting itself be mulcted in this way by conventional tariffs. The extent of this may best be understood if attention be given to the fact that hundreds of millions sterling, by way of loans to foreigners, have been advanced, in which a conventional tariff has been used, either of 25, instead of 25·2215, francs, to the sovereign, or of 48, instead of 49·316, pence to the dollar. F. H.

CONVENTIONAL VALUE. A term sometimes used as equivalent to Official or Declared Value (*q.v.*), for the Board of Trade and customs returns. The values of goods imported and exported were, down to 1870, computed at prices ascertained in 1694, as a conventional method of bringing them all together into money totals. Thus, *e.g.*, "eggs" were on importation calculated at a uniform value of 9d. a great hundred, though in the meantime the prices had risen to 6s.; and cottons on exportation at 1s. 6d. per yard, though they had fallen to 4½d. French values are re-adjusted every year, and those so obtained are conventionally used in all publications during the progress of the year, but corrected for the annual records. S. Bo.

CONVERSION OF BRITISH NATIONAL DEBT.* The form in which the British National Debt has been held has frequently been modified. The improved condition of the public credit has from time to time enabled the government to make arrangements for the payment of a lower rate of interest, an object which is accomplished either by the issue to the holders of the stock to be converted of another stock bearing a different rate of interest, or by the repayment of the capital value of the stock out of moneys borrowed for the purpose. In the one case the stockholder remains unchanged, although the nominal amount of his holding, and the interest paid upon it may be varied. In the other, the place of the original stockholder is taken by one who is ready to accept less favourable terms for himself.

Operations of this character have not been infrequent. The first conversion of the British National Debt was carried into effect in 1711, when a mass of floating obligations was converted into £9,177,968 of South Sea Company's stock bearing 6 per cent interest. In 1750, Mr. Pelham converted £54,413,433, 4 per cent stock into the same amount of new stock eventually to bear 3 per cent interest only. In 1817 the Irish debt, of £103,033,750, was converted into the debt of the United Kingdom. In 1822, Mr. Vansittart converted £149,627,867, 5 per cent stock into £157,109,217, 4 per cent stock. In 1824, Mr. Robinson converted £70,098,935, 4 per cent stock into 3½ per cent stock of the same amount. In 1830, Mr. Goulburn converted £150,790,176, 4 per cent stock partly into 5 per cent stock at the price of 70, but almost wholly into 3½ per cent stock at par. In 1834, Lord Althorp converted £6,489,190, 4 per cent stock into an equal amount of 3½ per cents. In 1844, Mr. Goulburn succeeded in converting £248,757,311, 3½ per cent stock into a new stock to carry 3¼ per cent for ten years and 3 per cent for twenty years. In 1853, Mr. Gladstone arranged for the conversion of £3,063,906, 3 per cent stocks. In 1883 a sum of £70,241,908, 3 per cents was converted into terminable annuities, and in 1884, Mr. Childers converted £23,362,596, 3 per cent stocks into 2¾ per cents at 102, and 2½ per cents at 108.

For some time prior to 1888, the price of the leading marketable securities, including British government stocks not redeemable at any early period, had made it evident that the state of the public credit rendered it unnecessary that so much as 3 per cent interest on the funded debt should be paid. On the 9th March of that year Mr. Goschen submitted a scheme for the conversion of the three per cent stocks then existing—consols, reduced threes, and new threes—into a single stock to bear interest, payable quarterly, at the rate of 3 per cent for the year ending the 5th April 1889, 2¾ per cent for the following fourteen years ending the 5th April 1903, and 2½ per cent for the next succeeding twenty years ending the 5th April 1923, and thenceforward until it should be redeemed. The new stock was to be called "Two-and-three-quarters per cent consolidated stock" until the 5th April 1903, and "Two-and-a-half per cent consolidated stock" thereafter. An equivalent amount of the new stock was offered in exchange for the stock to be converted, and any increase in the nominal amount of the debt was thus avoided, but an important difference in the position of the three old stocks as respects redemption rendered a different *modus operandi* and some variation of terms essential. The new 3 per cent stocks had been redeemable at any time since the 5th January 1873, and Mr. Goschen proposed to assume consent to the

conversion unless the holders formally dissented, in which case they were to be paid off at par in one sum, or in such proportions and in such order and manner as the treasury might direct. The amount of stock to which this arrangement was applicable was £166,399,043.

The position of the holders of consols and reduced threes was a better one, for they possessed a right to twelve months' notice before their stock could be redeemed. In their case it was considered that assent to conversion could not properly be assumed in the absence of a formal acceptance of the altered terms, and in order therefore to encourage holders to give such assent and to forego their privilege of notice, a bonus of 5s. per cent was to be given to those who agreed to the conversion within certain specified periods. The amount of the stocks to which this arrangement applied was in the aggregate £391,593,466, of which £322,681,033 was in consols, and £68,912,433 in reduced threes. The former amount was subsequently increased by £34,625,778, created in lieu of the remaining sums to be paid in respect of a terminable annuity into which certain stocks belonging to suitors of the supreme court had been converted.

In order to compensate stockbrokers, bankers, solicitors, and other recognised agents for the trouble to which the offer made to holders of consols and reduced threes would put them, the treasury were to be empowered to pay a commission of 1s. 6d. per cent on the stock converted.

The proposals made by Mr. Goschen were favourably received both in parliament and in financial circles, and a bill embodying them received the royal assent on the 27th March 1888. It speedily became evident that the scheme would be successful. The simplicity of the terms proposed had undoubtedly much to do with the success of the operation, together with an impression current among business men that such a conversion was certain to be carried through. By the 29th March, the holders of new threes who had expressed dissent represented not more than some £400,000 out of £166,000,000, whilst assents on the part of the holders of consols and reduced threes to the extent of £297,406,173, or nearly 76 per cent of the whole, were received by the 26th April, an additional £70,861,170, or 18 per cent, being converted between that date and the 1st June. On the 5th November 1888, new stock to the extent of £549,094,011 had been accepted and £1,199,102 old stock had been paid off, leaving a balance of £42,325,173 still to be dealt with.

The operations undertaken for the conversion and failing this the redemption, of this remanet may be thus summarised:

Stock redeemed by the action of the ordinary Sinking Funds	£1,356,461
Paid off under discount	6,128,006
Stock acquired by National Debt Commissioners and converted	8,164,312
Stock temporarily converted into a 3 per cent Book Debt	6,376,143
Stock automatically converted	8,426,141
Paid away or claimed in cash	11,874,110
	£42,325,173

The final results of the whole series of operations were as follows:—

Stock dealt with.	Amount.	Per Cent.
Converted into new stock	£565,684,465	95·7
Paid off in money	19,354,253	3·3
Converted into a temporary "Book Debt"	5,785,689	1·0
Net amount of stock dealt with	£590,824,407	100·0

The cost of the operations was as follows:—

Bonus to redemptioners	£958,528
Commission to agents	234,073
Remuneration to Banks of England and Ireland	116,054
Dividend paid in advance	1,715,815
	£3,024,470

The saving in interest on the National Debt exceeded a million in 1889-90; for the following thirteen years it was about £1,400,000 per ann., an amount doubled after 1903-4 when consols became a 2½ per cent Stock redeemable 1923.

See also supplementary article in Appendix.

[Hansard's *Debates*, vol. cccxxiii. pp. 709 and 1813; vol. cccxxiv. p. 118.—The Acts 51 Vict. c. 2, 51 & 52 Vict. c. 15, & 52 Vict. c. 4.—*Parliamentary Papers*, Nos. c. 5584, 283 of 1889 and 153 of 1890.—Also, for a detailed account of the operations, *Conversion and Redemption*, by E. W. Hamilton, London, 1889.] T. H. E.

CONVERSION, COLONIAL AND FOREIGN STOCKS. In its financial aspect "conversion" is a term generally applied to consolidations and simplifications of securities or to reconstructions of a national currency, like that carried out by Germany in 1873. It is intended to confine these remarks to the most important conversions of colonial and foreign stocks. (For the CONVERSION OF THE BRITISH NATIONAL DEBT see separate article.)

COLONIAL STOCKS.

Canada.—In 1860 Canada effected an important conversion of her 3, 5, and 4½ per cent debentures into 5 per cent consols or bonds, redeemable in 1885, when the holders were offered 4 per cent inscribed stock, and most of them accepted the offer.

Cape of Good Hope.—This colony has effected various conversions of debt, that of 1872 con-

verting the securities of the Cape Railway into government 4½ per cent consolidated debentures and that of 1886, offering the holders of the entire debt bearing 6, 5, 4½, and 4 per cent, the option of converting into 4 per cent inscribed stock. This offer applied to £13,343,100 in bonds and was largely carried into effect.

India.—In 1874 there was a partial conversion of the old 10½ per cent stock of 1833. In 1880 India 5 per cent stock was converted into 4 per cent stock. In 1887 India 4 per cent stock was offered the option of converting into 3½ per cent stock, when £48,215,673 accepted the terms offered. Since then there have been some conversions into 3 per cent stock.

New Zealand.—This colony effected important conversions of debt, in 1868, when New Zealand 5 per cent consols were issued, and in 1885 and 1886, when loans of about £14,000,000 were allowed to convert into 4 per cent inscribed stock, the holders mostly availing themselves of the option.

Jamaica, Mauritius, and Natal have likewise effected conversions of debt.

Foreign Stocks.

In 1869 Austria compulsorily converted all her issues into internal 5 per cent rentes, whereupon the Council of Foreign Bondholders issued "Anglo-Austrian bondholders' certificates" to cover the loss entailed. These were redeemed at £5 each in 1871. In 1888 there was a partial conversion into 4 per cent gold rente, which will probably be carried further.

Egypt has also effected many consolidations of this nature, but the unification carried out in 1877 was by far the most important of them. All the then existing loans of Egypt, many of them carrying high rates of interest and sinking fund, were converted into 38½ per cent 5 per cent preference stock, and 61½ per cent unified stock, which was to bear up to 7 per cent interest. But in reality it has borne 4 per cent interest. At the same time the Khedive's private loans were converted into Daira Sanieh debt. These conversions were the result of Mr. Goschen's mission in 1876, which proved the financial salvation of Egypt.

French debt conversions have been numerous, one of the latest being in 1883 of the 5 per cent national loans into new 4½ per cent rente to the amount of £271,591,430. This stock may be again converted from 1893. In 1878 new 3 per cents were issued in conversion of some railway stocks; in 1883 this stock was added to by conversion of the savings banks' deposits. Altogether about £75,000,000 was so dealt with.

Mexico has made many conversions, with and without the consent of her creditors. The last, in 1886, whereby the entire foreign debts were exchanged for consolidated debt of 1886, bearing 1 per cent rising to 3 per cent interest, was the result of protracted negotiations following on the practical repudiation of 1866.

Peru, to go no farther back, effected partial conversions in 1852, 1862, 1865, and 1872, and it is evident, that before Peru ceases to be classed amongst the list of defaulters, a further consolidation and reduction of debt will have to be carried into effect.

Russia has carried out a number of conversions, partly of internal debt. But her latest conversion, that of 1889, is to exchange the 5 per cent railway loans of 1870, 1872, 1873, and 1884 into £49,120,783 of 4 per cent bonds.

Spain effected her first conversion of foreign debt in 1834, and from that time up to the consolidation and conversion of 1881-82 her arrangements with her creditors were numerous. By the last arrangement all her outstanding loans were exchanged for 4 per cent external and internal stock, with a large reduction in the nominal capital of the debt.

Turkey in 1865 converted her many internal debts into a general debt bearing 5 per cent interest. In 1882 all the loans upon which Turkey was in default were converted into four series of 1 per cent bonds amounting in all to £91,842,000.

The United States in 1871 and 1873 converted 6 per cents into a 5 per cent funded loan for $500,000,000. In 1876 a further $300,000,000 in 4½ per cents were issued for conversion purposes; and in 1877-78 another $739,000,000 were issued in exchange for 6 and 5 per cent bonds. In 1881 the 5 per cents of 1871-73 were renewed at 3½ per cent, and in 1882 they were converted into 3 per cents, which have since been entirely redeemed.

There is hardly a foreign country of any standing which has not carried out similar operations, the main object in all being to pay lower rates of interest upon their obligations. Recent colonial and foreign conversion operations have been undertaken to avoid the early maturity of war-time borrowings. The impaired credit of many countries, combined with a general demand for loans for reconstruction, resulted in high rates of interest which were not favourable to conversion operations.

CONVERSION OF ARABLE LAND INTO PASTURE IN ENGLAND.—Historically, two epochs stand out in which tillage has been on a large scale converted to pasture in England: (1) 1400-1580; (2) 1878 to present time.

(1) So long as self-sufficing farming was practised or feudalism prevailed, little or no attention was paid to the nature of the soil or climate. Whatever corn was required for the support of isolated villages, organised as separate communities complete in themselves, was necessarily grown upon the spot, and land was valued less for the rents it produced than for the men it supported. Divisions into arable and pasture were therefore dictated by social exigencies

instead of natural advantages. At the end of the 14th century farming for profit was introduced, and gradually tillage was superseded as the staple agricultural industry; pasture became the rule, and wool the source of the farmer's wealth. This change was, in the first instance, due to social causes. The BLACK DEATH (*q.v.*) depopulated rural districts. Landlords were deprived of their quit-rents, and holdings thrown upon their hands. There was plenty of land, but few to work it; little money was forthcoming to pay for labour even when it was available. In this crisis landlords adopted one of three courses: (*a*) they offered stock and land leases (Rogers, *Agriculture and Prices*, i. p. 24); (*b*) they exacted the labour services, which had now become exceptionally valuable; (*c*) they laid down their land to pasture, and enclosed vast tracts as sheep-runs. From these courses followed important results. From (*a*) sprang the class of tenant farmers; from (*b*) the Peasants' Revolt of 1381 and the effort to destroy the manorial muniment rooms (Denton, *Fifteenth Century*); from (*c*) the acceleration in the break-up of the old manorial and common-farm system, as a more profitable method was discovered of employing land. If this last course was adopted upon lands depopulated by the Black Death, no social grievance was caused. If the change simply meant the conversion of common farms into enclosures on which corn and cattle could be conveniently raised, it constituted an advance in agricultural science, and displaced little or no labour. But, as a rule, the change meant that landlords withdrew their demesnes from the common farms, ceased to employ labour, enclosed an undue share of the wastes, deprived copyholders and tenants of the means of cultivating their own holdings, and threw the new enclosures into vast sheep-walks. Thus the change caused a large amount of agrarian distress and social discontent [*Libelle of English Polycye*; Denton, *Fifteenth Century*; More's *Utopia*, p. 41 (English Reprints, 1869); *Dialogue between Cardinal Pole and Thomas Lupset*, E. E. T. S.; *Supplication of Poor Commons*, E. E. T. S.; F. W. Russell, *Kett's Rebellion*, etc.] When once the tendency began, it was accelerated by the dissolution of the monasteries and the nigh profits of the rising wool trade, and continued to develop in spite of the prohibitions of the legislature (*e.g.* 6 Hen. VIII. c. 5; 7 Hen. VIII. c. 1; 25 Hen. VIII. c. 13; 27 Hen. VIII. c. 22). England in fact became a grass-growing, wool-producing, pasture country until the pressure of population at the close of the 18th century reversed the agricultural policy.

(2) War prices of corn (1797-1815) encouraged farmers to plough up land for corn. But the preponderance of pasture over arable land continued after the change had been long in progress. Of this fact two inquiries give sufficient proof. Mr. Comber (*Inquiry into the State of National Subsistence*, 1808) calculates the arable land *and gardens* of England and Wales at 11,588,000 acres, the lands depastured by cattle at 17,479,000 acres, and the commons and cultivated wastes at 6,473,000 acres. Mr. Couling (Select Committee on Emigration, 1827) calculated in that year the arable land *and gardens* of England and Wales at 11,143,370 acres, the meadows, pastures, and marshes at 17,605,630; the uncultivated improvable wastes at 3,984,000 acres. Temporarily checked from 1815 to 1850, the tide set subsequently in the direction of the conversion of pasture into arable land. In 1874 there were 13,900,000 acres of land in England and Wales under corn crops, green crops, or rotation grasses, as against 12,071,691 acres under permanent pasture. In 1875 there were 13,980,000 acres of land under corn crops, etc., against 12,202,596 acres of pasture. Thus, as compared with 1808 or 1827, the arable land exceeded the pasture by one and three quarter million acres, instead of the pasture exceeding the arable land and *gardens* by six and a half million acres. The preponderance of arable land over pasture ceased to increase after 1878. In 1879 and 1880 the area of arable land was 13,480,500 acres and 13,210,600 acres, and the area of pasture land was 13,007,400 and 13,267,600 acres. Thus, by 1880, the tide had commenced to turn. In 1888 and 1889, the area of pasture land exceeded the arable land. In 1888 the arable land was 12,715,800 acres, the permanent pasture, 14,554,500. In 1912 the arable land was 14,660,300 acres, the permanent pasture, 17,335,700 acres. See above, ARABLE LAND, CONVERSION TO PASTURE. R. E. P.

CONVERTIBILITY OF BANK NOTES. The convertibility of bank notes into specie on demand is an essential condition of a sound currency. It has been held that immediate convertibility on demand is a complete safeguard against over-issue, for if a redundant note were in circulation the provision that it would be immediately paid on demand would appear sufficient to ensure that such a note, when redundant, should immediately be withdrawn. But, according to the currency principle supported by Sir R. Peel (see CURRENCY DOCTRINE), the question of convertibility might depend on other considerations. "The real question to be solved is, how to regulate the quantity of the paper circulation, so as to keep its value identical with what the value of the metallic currency should be" (speech of Sir R. Peel, House of Commons, May 20, 1844). "Convertibility alone will not ensure this. Convertibility provides, indeed, the means of taking out of circulation a quantity of paper already in excess; but it imposes a very imperfect check on putting too much paper into circulation." Sir R. Peel did not attempt

to reconcile the latter half of this sentence with the former, for it is difficult to understand how paper substituted for money can remain in excess of the wants of the country when the means of taking this excess out of circulation have been provided. Real convertibility, that is to say the means of obtaining specie for notes whenever required, appears an ample safeguard against over-issue of notes. Bank notes, however, play a very different part in the financial system of the country from what they did at the commencement of last century (see BANK NOTE ; CURRENCY DOCTRINE.)

[Tooke and Newmarch's *History of Prices* is a perfect mine of information on the subject.—Fullerton, *On the Regulation of Currencies.*—James Wilson, *On Capital, Currency, and Banking*, and the writings of Huskisson, Ricardo, Sir W. Clay, Colonel Torrens, Walker on *Money*.]

CONVEYANCE. (1) The transfer of the ownership of property. (2) The instrument by which the transfer is effected. A conveyance, to be effectual, must be embodied in a deed (which is a document signed, sealed, and delivered by the parties in the presence of a witness). The conveyance of property need not necessarily have the effect of transferring the beneficial rights of ownership ; in the case of a mortgage, for instance, the legal estate—*i.e.* the formal right of ownership—is vested in the mortgagee, but the mortgagor, as a general rule, remains in possession and in the full enjoyment of an owner's material right—excepting, however, the right of alienation. The methods of conveyancing have been considerably simplified within the last two generations, and even within the last decade. A modern conveyance begins with the date and the names of the parties ; then follow the recitals, which in the first place explain the title, and in the second place state the nature of the transaction which has caused the conveyance to be effected (each recital beginning with the word "whereas"); these being finished, the so-called "Testatum" ("Now this indenture witnesseth") introduces the effective part of the conveyance, beginning with the statement of the consideration and the acknowledgment of the same, then proceeding with the "operative words" (*e.g.* "the vendor conveys," etc.), and afterwards describing the "parcel"—*i.e.* the property which is the object of the conveyance ; by the "habendum" the nature of the estate which is conveyed is explained (whether in fee simple, for life, upon trust, etc.); and finally the "covenants" contain the mutual promises concerning the property or the adjoining property. Many of the alienating owner's covenants have been rendered unnecessary by the Conveyancing Act of 1881, the addition of certain expressions to the operative words implying a number of covenants which formerly had to be set out at great length. It is unnecessary to mention that the description of a conveyance as given here is liable to a great many variations according to the circumstances of the case. A conveyance *on sale* is liable to a stamp duty of 5s. for every £50. E. S.

COOLIE SYSTEM. By this system a migration of labourers from India, China, and the South Pacific, to other tropical countries under European government, is placed under state regulation. The movement began (1834) when the freed negroes largely declined plantation work. The management being at first in private hands, unpleasant rumours called for government intervention, and now the egress from India is strictly controlled (acts of 1864 and 1869), the terms of engagement are regulated, and the colonial governments held responsible for their execution. Commissions of inquiry were issued for Demerara (1870) and Mauritius (1875). The French government on their part undertake inspection in their colonies. The movement from China is regulated by a convention (1866) between the governments of China, Great Britain, and France.

The chief colonies employing coolie labour are Demerara (one-third of population), Trinidad (two thousand a year), Mauritius (five-sevenths of population), Natal (one-fifteenth), Queensland (chiefly from the Pacific Islands), and the Straits. Outside the British empire, Cuba, Peru, Tahiti, and the French sugar islands.

The system is interesting—(1) as showing the beginnings of a movement from the two great centres of population in Asia, the dimensions of which cannot be foreseen ; and (2) as an instance of non-economic considerations inducing state interference with private enterprise, for the protection of labour against the individual's ignorance of the value of his labour and his acceptance of a standard of living determined by the offers of competing capitalists.

[*Cornhill Magazine*, 1867.—Jenkins, *The Coolie*, London, 1871, an adverse report.—Histories of the colonies above mentioned.] A. C.

COOPER, THOMAS (1759-1840), was born in London and admitted to the bar, became a Radical, was involved in political troubles, and finally followed his friend Priestley to the United States, where again he took an active part in political affairs. In 1820 he became president of Columbia College in Columbia, South Carolina, and held that place till 1834.

In addition to pamphlets, he wrote *Lectures on the Elements of Political Economy*, Columbia, 1826, and a *Manual of Political Economy* (Washington, 1834), both good text-books in their day, expounding the doctrines of Adam Smith and Ricardo. F. W. T.

COOPER, THOMAS (1805-1892) imprisoned in early life as a chartist (see CHARTISM), was among the last survivors, as he had been one of the most sincere of the leaders in that movement.

CO-OPERATION

Co-operative Associations, p. 409; Co-operative Farming, p. 413; Co-operative Workshops, p. 415; Co-operation, Partial (Oldham Cotton Spinning Companies), p. 417; Co-operation, Social Aspects of, p. 418.

Co-operative Associations. The term co-operation has been employed by economists in two senses, (*a*) as indicating certain broadly marked phenomena connected with the automatic development of human communities, of which what is most widely known as division of labour is an instance; and (*b*) as indicating the deliberate association of individuals to form trading bodies on certain specific principles for their common advantage. The latter use of the term is the more common of the two, outside text books on economics.

(*a*) The simplest conceivable case of co-operation is when two men combine to move a weight too heavy for either to deal with singly. In this case two similar forces are *integrated*. Co-operation of this kind is only of limited application, for the number of men whose power can be brought to bear on even a large object at suitable points is comparatively small, unless some form of machinery is used. But the labour of men may also be combined by their performing different tasks simultaneously, in order to produce a joint result, and as soon as this is recognised the growth and organisation of the community become capable of much more rapid progress than before. A maker of bows can do his work without assistance, but his labour will be more efficient if he can send out some one to collect suitable pieces of wood for him. A skilful smith could, at a pinch, make a simple bit of ironwork by his own unaided exertions, but his trouble is enormously lightened if he has an assistant to blow his bellows. The case of the smith is typical of all operations which require two or more series of acts to be performed more or less simultaneously—in this case, blowing to keep the fire hot, and hammering. If the piece of ironwork to be executed is at all large, an assistant becomes indispensable. The thing could not be done at all without him. Supposing he gets a third man to sharpen or polish such articles as he and his companion have been making, the efficiency of the whole group is much increased. The constitution of this group of artificers illustrates the principle of division of labour, as Adam Smith called it. Modern economists have adopted the more accurate expression division of employment, but Smith's description of the principle as illustrated in pin-making is still the classical description in the English language (see *Wealth of Nations*, bk. i. ch. i.), though he left it to his successors, *e.g.* Babbage, to point out some of the most important advantages of the division of labour.

What is called civilised society has only become possible because this principle of division of employment has been carried out to the full extent admitted of by the progress of scientific knowledge. For an analysis of the reasons why it has so greatly increased the efficiency of labour, reference may be made to Mill, bk. i. ch. viii.; Sidgwick, bk. i. ch. iv.; Marshall's *Economics of Industry*, bk. i. ch. vii. viii. (see Division of Labour). Division of employment implies, however, specialisation of employment, a result which is not without disadvantages. When there exist large bodies of men who can only perform some special kind of skilled labour, portions of these bodies are from time to time in danger of becoming redundant, and consequently of losing their means of subsistence. This evil result may be produced by climatic influences, by a miscalculation as to the requirements of the community, or in modern times of the communities supplied, by changes of fashion, or by new inventions. The latter cause is much less injurious to the men than it used to be, as the process of improvement, though constant, is only gradual. The violent disturbance of the labour market which followed the first introduction of steam machinery and of the factory system is not likely to occur again. The other three causes are still active and produce serious effects. It is to be observed that specialisation of employment is, from the nature of the work to be done, much less extensively carried out in agriculture than in manufacturing.

The mode in which the co-operation of individuals in modern society occurs presents other aspects besides division or specialisation of employment. It is marked, as is well known, by the association of larger and larger bodies of men acting under a single firm or company. Provided the management is good a large business can be conducted more economically than a small one,—that is, the labour of those concerned is more efficient in the former than in the latter case. Of late years this tendency has taken the form of the amalgamation under one management of several works engaged in producing the same article. Another very important feature of the modern conditions of industrial life is the high degree of dependence of each industry for its prosperity on the prosperity of other industries. Any influence tending to increase the activity of one trade tends to make several other trades more active, and generally the efficiency of labour in all trades is increased to some extent. Conversely depression in one trade produces depression in others. A high degree of economic efficiency arising from a high degree of industrial organisation necessarily carries with it a liability to frequent derangement of that organisation, the parts forming the industrial organism becoming more mutually dependent in proportion as differentiation is carried further.

(*b*) Co-operation in the sense of an association of individuals for certain specific business purposes is of two kinds: associations of consumers, and associations of producers.

Associations of consumers arose from the desire of individuals in the possession of small incomes to obtain the commodities they require for daily use at wholesale prices. In 1844 twenty-eight workmen of Rochdale subscribed a fund to be used in the purchase of flour, sugar, and other articles, which were bought retail by the subscribers at the ordinary prices of the district, the excess realised being periodically divided among the members after all costs had been met. The experiment was thoroughly successful and has been widely imitated. Shops worked on this principle are now well known as co-operative stores. Those carried on by workmen, which are now very numerous, have in some cases adhered to the lines on which they were started, which included the division of part of the profits among the persons employed in the store, and the setting aside of another part for educational purposes, but in some cases these latter practices have been dropped, the whole surplus being divided among the members of the store. The encouragement to thrift has been very great. The profits being at the disposal of the members only at fixed intervals, and in appreciably large amounts, are less likely to be dissipated. The stores also afford direct facilities for investment. As a working man co-operator said, "We may almost eat and drink ourselves into a house." The enormous institutions started in London by members of the middle classes have been highly successful, but are not co-operative in the special sense in which the word is used by those to whom "co-operation" is a species of religion. These great stores sell their goods at the lowest price they can, which is, of course, an excellent thing, and just what is wanted by the classes for whose benefit these stores are intended, but the persons employed in them have no share in the profits. The consumers, as such, have no share in the profits. It is this feature in their organisation which leads "co-operators" in the more special sense of the term, to deny that these stores are truly co-operative. Useful as they are they are less interesting to the economist than the real co-operative associations, from the growth of which great and salutary changes in the structure of society are looked for by those who are best acquainted with the subject. Many of them have become merely large shops differing hardly at all from big commercial concerns.

Co-operative Societies. — The associations which are conducted in the United Kingdom, either theoretically or in fact, on true co-operative principles, are of two kinds, distributive and manufacturing. The origin of distributive societies has already been referred to, and it is not necessary to go at length into the history of the movement which, from such small beginnings, has achieved the remarkable results now apparent. The manufacturing and industrial side of the movement has not yet attained its proper development in the United Kingdom. Subjoined are tables which will furnish a general idea of the present magnitude of this movement, from which so much is hoped by thoughtful students of sociology. The figures of which these tables are a condensation, will be found in full in the Report of the Central Co-operative Board to the Plymouth Congress, 1910.

The following is a statement of the number of co-operative societies existing in the United Kingdom at the end of 1909, and of certain particulars regarding their business; arranged (A) with reference to geographical divisions; (B) according to the special functions they perform.

A

Sections.	No. of Societies.	No. of Members.	Share Capital.
Irish	23	9,335	£52,111
Midland	223	311,437	3,344,188
Northern	145	304,589	4,687,461
North Western	475	1,007,186	16,388,278
Scottish	294	405,129	5,245,820
Southern	223	370,381	2,742,394
South Western	81	98,711	813,707
Western	97	78,525	862,005
Total	1561	2,585,293	34,135,964

Sections.	Investments.	Received for goods sold '09.	Net profit in '09.
Irish	£27,601	£280,942	£20,716
Midland	1,823,913	7,529,806	883,620
Northern	2,915,667	10,769,530	1,872,510
North Western	11,895,699	54,925,533	5,134,424
Scottish	5,636,759	22,714,409	2,852,785
Southern	1,270,307	7,978,530	619,297
South Western	414,765	1,769,508	220,415
Western	472,251	2,884,006	407,356
Total	24,456,962	108,852,264	12,011,123

B

Sections.	No. of Societies.	No. of Members.	Share Capital.
			£
Distributive	1430	2,469,039	30,804,246
Productive	119	31,806	858,039
Supply	4	81,755	378,792
Special	6	1,254	26,644
English Wholesale Distributive	1	1,163	1,657,305
Productive	..	..	..
Scottish Wholesale Distributive	1	276	410,938
Productive	..	..	..
Total	1561	2,585,293	34,135,964

Sections.	Investments	Received for goods sold '09	Net profit in '09
	£	£	£
Distributive . . .	20,405,988	70,315,078	10,847,945
Productive . . .	452,448	3,142,047	184,159
Supply	148,733	2,104,618	52,006
Special	290,644	157,447	4,257
English Wholesale			
Distributive . .	1,487,094	19,469,782	429,208
Productive . .	..	6,206,156	201,310
Scottish Wholesale			
Distributive . .	1,672,055	5,090,421	232,493
Productive . .	..	2,366,715	59,745
Total	24,456,962	108,852,264	12,011,123

Statement showing the above items at the end of the undermentioned years.

Yrs.	Societies.	Members.	Share Capital.	Trade.	Profits.
			£	£	£
1861	..	48,184	333,290	1,512,117	..
1871	746	262,188	2,305,951	9,437,471	670,721
1881	1230	642,783	6,937,284	24,926,005	1,979,576
1890	1554	1,117,035	12,261,952	43,215,710	4,170,038
1909	1561	2,585,293	34,135,964	108,852,264	12,011,123

It will be at once seen from a glance at the totals given in these tables that, taken as a whole, the societies to which they refer are in a highly satisfactory condition. The net profit of £12,011,123 shown at the end of 1909 is very large relatively to the share capital, and the investments amounted at that time to over £24,456,000. The value of stock, land, buildings, etc. was, we may observe, over £28,286,948.

The strength of the movement lies in the northern and north-western districts of England and in Scotland. Manchester is, indeed, the headquarters of co-operation, for it is there that the English Wholesale Society, which is commonly called "The Wholesale," has its chief office; but the great societies of Rochdale, Leeds, Halifax, Huddersfield, Burnley, Accrington, Bolton, and Bradford each contribute a very large quota to the total business done. In the midland, southern, and western districts co-operation is very imperfectly developed, but great, and to a large extent successful, efforts are being made to improve matters in this respect, especially in London.

One fact which should be noted was the small volume of co-operative production as late as 1889—meaning by co-operative production, in the full sense, a system in which the wage-earners, as such, share in the profits. This feature was a source of keen regret and disappointment to zealous co-operators. The report of the Committee on Production to the Ipswich Congress, 1889, was in many respects hopeful, and some progress has been made since then, but the obstacles to success in this department of co-operation are, and always have been, much greater than in the distributive department. The difficulty which impressed the Ipswich Committee most was to get productive societies to abstain from competing with each other, as will be seen from the following extracts from their report: "As we have before stated in our reports, we have to admit that in the multiplication of these very small societies, each struggling for a separate life, there is the possibility of great difficulty in the future. We have to regret that our attempts to bring these societies into federation with each other have entirely failed, owing in a great measure to petty jealousies which seem inseparable from such associations. In the view of this committee it is a matter for serious consideration how far the formation of these small and isolated societies should be encouraged, unless there is some guarantee that they will act in co-operation with each other." And in concluding the report, the committee observe, "that there still exists among co-operative societies and their members a deplorable amount of disloyalty towards the efforts of those societies which are honestly striving to work out this difficult problem of co-operative production." These severe expressions are quoted partly in order to explain the comparative failure of productive co-operation at first, and partly to show that the leaders of the co-operative movement were men who looked facts in the face, and did not seek to disguise them under a cloud of words. This is an attitude of mind which is favourable to the ultimate success of the movement. It might almost be said that it is a guarantee of it, for the principle of productive co-operation is a sound one, though its practice requires the prevalence of a higher level of education, both moral and mental, than at present exists in the majority of co-operators. That a greater approximation towards the principle is possible may perhaps be inferred from the fact that, besides the Wholesale's boot and shoe works at Leicester, there are four corn-milling societies, each of which sold over £100,000 of goods in 1909, while one of these, the Halifax Flour Mills, sold over £446,000 worth, and had £228,400 of investments at the end of 1909. Flour mills are still, as they have been for many years, the most successful branch of the movement; their sales in 1909 were £1,106,000, out of a total of £2,287,000. In Scotland bakeries do the largest business. Co-operative farming has so far answered less well in the United Kingdom (see CO-OPERATIVE FARMING), though something in this direction has been done in Scotland, and butter-making on the co-operative plan has been commenced in Ireland through the exertions of Canon Bagot and the Hon. H. C. Plunkett. As will be seen below, co-operative farming is far from being a failure on the continent.

It has already been said that co-operative manufacturing encounters much greater diffi-

culties than co-operative distribution. The nature of the difficulties has been described as they present themselves practically to the able and energetic men who are trying year by year to overcome them. They can only be got rid of by degrees, for they are the result of the low state of general education. Professor Marshall has pointed out in *The Economics of Industry*, and also in his address to the Ipswich Congress (1889), that higher mental qualities are needed for carrying on a large manufacturing concern than in conducting a successful shop. At present workmen have not realised that good management must be paid for and is worth paying for (compare Walker, *The Wages Question*, ch. xv., *Co-operation: getting rid of the entrepreneur*). Their attitude in regard to this subject is shown by the remark attributed to one who became a Cabinet Minister, that "he had never seen a man who was worth more than £500 a year." It is not suggested that managers of co-operative societies ought to be paid at this or any other specific rate in all cases, but until workmen generally realise that there are men whose worth for special purposes is, in the present state of society, £500, and even more than £5000 per annum, they will never understand why co-operative manufacturing fails to succeed in competing with its capitalist rivals. Still the obvious success of the Halifax Flour Mills is evidence that in one branch of trade, at any rate, co-operators can adapt themselves to the industrial requirements of the time if they take the proper means.

The plain fact is that co-operative manufacturing is still in the experimental stage. Progress has been made since 1889 when, at the annual Co-operative Congress, held at Ipswich in that year, there was an interesting discussion on the question whether small productive societies should be encouraged to continue to work independently of the Wholesale, or whether the Wholesale should undertake the work itself. The discussion ostensibly related to the best means of establishing PROFIT-SHARING (*q.v.*) in production, and the chief charge brought against the Wholesale was that it did not share profits with its workers, that, like some of the original societies, it had degenerated into "joint-stockism." The latter principle did not seem to be wholly approved even by the advocates of production by the Wholesale Society, but Mr. Benjamin Jones, of the Wholesale, in the course of a paper read to the congress, pointed out that at Oldham, where many mills are owned by workmen, "joint-stockism" had led to the same results as "profit-sharing" was intended to lead to by making workmen well off. The whole discussion, which ended in the approval by the congress of production carried on by societies independent of the Wholesale, but "federalised," was a very business-like one. There are, of course, numerous differences of opinion on minor technical points in relation to distributive co-operation, the most important of which is the question how far credit should be allowed to members of stores. The balance of opinion is, it need hardly be said, against the giving of credit.

Co-operation abroad can only be briefly touched on here. A good deal of valuable information on the subject will be found in a paper by Mr. Vaughan Nash on "Co-operation in relation to International Commerce," read before the Ipswich Congress. Mr. Nash had a special object in writing this paper, namely, to urge on co-operators in different countries the advantage that would result from their working together more than at present, but it furnished a useful *résumé* of the position of co-operation in foreign countries in 1888. During the succeeding years a considerable change has taken place in the attitude of the continental socialist co-operators. For many years they despised co-operation among consumers, as being a "bourgeois institution" and a support to "capitalism." They have discovered that, even from their point of view, co-operation among consumers has merits. This was perceived first in Belgium and later in other places. At the International Co-operative Alliance, which held its meeting in Hamburg in 1910, a body of socialists who had been attending the Socialist Congress at Copenhagen were present in order to cement an alliance between Socialism and Co-operation, on equal terms. The free development of co-operation is now recognised as a good thing by the socialist leaders of the Continental Countries. In two important respects these countries are still in a decidedly more advanced condition than the United Kingdom, namely, in regard to agriculture and banking. In France, Austria, Germany, Denmark, Italy, Switzerland, and Sweden, there exist powerful organisations of peasant proprietors for the joint purchase or hire of farming implements and other requirements, for acquiring and working dairies, for the joint sale of produce and for obtaining credit. Long ago Denmark possessed a most highly organised system of agricultural co-operation, and it is owing to this that the export of Danish butter has so much increased of late. Co-operative dairies seem to succeed in most countries, including the United States, where "creameries" are an important feature. There can be little doubt that the system of popular banks with which the name of Schulze-Delitsch is associated has been of great service to agricultural co-operation in Germany, and a modification of the same plan devised by Signor Luzzati was many years ago introduced into Italy (*v.* BANKS, POPULAR). These loan societies are closely connected with the farming societies, being in fact chiefly composed of the same individuals. They contract loans on the guarantee of all the members and

make advances to members at a slightly higher rate than that at which they borrow, but still much below the terms at which the individual members could raise money themselves. As regards the joint sale of agricultural produce the system is less developed than in other respects, and, generally, distributive co-operation is too much neglected on the continent, except in Switzerland and Holland, and to some extent in Belgium. As is well known, there are co-operative workshops in France of old standing, the most famous being those with which the names of Godin at Guise and Leclaire at Paris are associated (*v.* CITÉ OUVRIÈRE; FAMILISTÈRE). These two experiments in profit-sharing have realised a remarkable degree of success. It had always been feared, even by friends of co-operation, that such institutions were dependent on the lives of the individuals who started them, but so far these unfavourable anticipations have been agreeably disappointed. For a description of the very successful work carried out by the late M. Godin see the translation of the pamphlet *Twenty-eight Years of Co-partnership at Guise*, published by the Labour Co-partnership Association, 6 Bloomsbury Square, London, W.C. The Right Hon. T. Burt, in the preface, bespeaks "the careful attention of co-operators, of trade unionists, of liberal-minded employers" to this interesting history.

"Russia," says Mr. Nash, "is by far the most co-operative country in Europe, but its village communities, or *mirs*, are beginning to show signs of dissolution, and its *artels*, being nomadic and shifting, have but little bearing on the question of international co-operation." The ARTEL (*q.v.*) is a species of workmen's society which is found in all branches of industry in Russia, the members of which jointly execute pieces of work, especially buildings, railways, and bridges.

As regards the United States, we have already mentioned the existence of creameries as the most important feature from a co-operative point of view, but there are also some co-operative workshops. There were also many co-operative stores before the Civil War, but their progress since then has been very slow. In the British colonies there is very little co-operation of any kind. W. H.

CO-OPERATIVE FARMING. The application of co-operation to agriculture was one of the earliest aims of the founders of co-operation, and formed a part of almost all the plans of Robert Owen and his followers. The best known experiment in the pioneer period was that of Rathlahine (sometimes called Ralahine), in County Clare, Ireland, in 1831-33. Mr. E. T. Craig, a disciple of Robert Owen, was invited by Mr. J. Scott Vandeleur, an Irish landlord, to form a society based on the co-partnership of landlord and tenant. The farm was 618 acres in extent, half of it under tillage. The labourers at the outset numbered twenty-eight men, twelve women, and fifty-two children. Subsequent admissions to membership were by ballot. Mr. Vandeleur, the landlord, was president and reserved to himself a power of veto, as well as the right to discharge labourers during the first year. He also stipulated for the exclusion of intoxicants. The labourers elected a committee who met nightly to arrange the farm work. At the year's end the landlord received his rent of £900 in kind, taking the risks of variations in value. The rest of the produce, which was not consumed by the members and charged to them, was sold for common account. The first profits were appropriated to enhancing wages twenty and twenty-five per cent. The surplus beyond was devoted to a fund to pay out the landlord. The experiment was successful commercially. It also restored peace on the estate and established harmony in the relations of the landlord and his people. But it was brought to a sudden end in 1833 by the flight of Mr. Vandeleur, who had ruined himself by gambling (see *Co-operative Agriculture* by Wm. Pare, Longmans, 1870; and *History of Ralahine*, by E. T. Craig; Trübner and Co., 1882). About the same time, 1829, Mr. Wm. Gurdon leased a farm at Assington, Suffolk, to a body of his labourers who formed themselves into a voluntary co-operative society, based on a plan of dividing equally the produce of the farm. He lent them capital without interest. The experiment was very successful, the labourers repaying the loan capital and making large profits for themselves. This success led to the leasing of a second farm to labourers in 1853, to be worked on the same lines. This also was very successful, yielding a profit to the labourers of £3674 up to 1879. In 1883 the association had to ask for help from outside sympathisers, in consequence of continued agricultural depression. The land being stiff clay, almost all under tillage, is suitable for little else but wheat-growing, and the co-operative labourers were unable to make a profit on wheat-growing after 1879. In 1884 a co-operative society was formed to continue the farm, the labourers' capital being augmented by subscriptions of co-operative societies and friends. This society, the Assington Agricultural Association, at present shows an annual loss of about £1 per acre. The No. 1 farm established in 1829 is still being worked by the labourers' society, but no accounts are published.

In 1829 Lord Wallscourt commenced an Irish experiment, and reported in 1846 that, after seventeen years' trial, the venture had answered beyond his hopes; he had been able to travel abroad a year at a time, and on his return always found the farm had prospered.

He divided profits with his labourers, reckoning every £5 of their wages as being equal to £100 of his own capital. (See Professor F. W. Newman's *Lectures on Political Economy*, p. 338, Chapman, 1851.)

After the pioneer periods of Robert Owen and the Christian socialists, the co-operative movement, advancing on the line of least resistance, left farming experiments—as it left productive efforts—almost neglected, and attended almost exclusively to the development of the simple stores system. But from time to time, during the thirty years which followed the establishment of the Rochdale Pioneers Society in 1844, co-operative farming experiments were made by advanced co-operators. Mr. Walter Morrison, M.P., established a co-operative farm in the Midlands, giving the labourers a share in the profits and management. The experiment was partially successful, paying five per cent interest, but in other respects was not considered sufficiently hopeful to render it worth while to persevere. Lord George Manners adopted profit-sharing with his labourers upon a farm at Cheveley, Newmarket. He told the writer of this article that the experiment was so successful as to yield him ten per cent on his capital, and permit of £3 per worker being paid as dividend on labour. To stimulate thrift Lord G. Manners adopted the plan of paying the labourers' dividends into the post office savings bank, and "handing the pass-books to their wives"—a device which he said answered perfectly. It was his intention to form a more complete co-operative society to work the farm, but his death brought this interesting and successful effort to a close. More recently Mr. Bolton King established two co-operative farms at his residence near Leamington. The rules were very generous to the labourers, leaving them with full powers over both the land and the landlord's capital without the checks which in other cases have naturally been provided. The result was not successful. Equally unsuccessful was an attempt by Mr. William Lawson at Aspatria near Carlisle, described by him in a work called *Five Years of Gentleman Farming*, edited by G. J. Holyoake. Mr. William Lawson, a brother of Sir Wilfrid Lawson, gave time and money freely to his effort, but he adopted methods of farming which were condemned as impracticable by the Royal Agricultural Society's Commissioners on steam ploughing, and the failure can scarcely therefore be imputed to the co-operative arrangements (vide *Journal of the Royal Agricultural Society of England*).

Recently the opinion in favour of co-operative farming has received a great impetus, and many co-operative societies have taken farms to work as part of their enterprise. The report of the Central Co-operative Board for 1910 gives a list of ninety-one known co-operative farms of which the following is a summary:—

Section of United Kingdom.	Number of Co-operative Farms.	Acreage. Owned.	Acreage. Rented.	Capital Invested.	Interest on Farms Owned.	Rent where Rented.	Profit.	Loss.
				£	£	£	£	£
Midland . .	24	727¼	3014½	62,735	2054	4862	1113	1025
Northern . .	23	1157	1752	73,055	1872	2999	1225	918
North-western	28	649¼	858¾	62,542	1716	1652	436	2167
Scotland . . .	4	160	548	20,375	770	1544	2574	1055
Southern . . .	7	410	370	30,090	1063	506	808	197
South-West . .	2	201	104	20,148	443	305	. .	680
West	1	. .	205	750	22	165	. .	37
Farming Societies .	2	. .	802¼	4,217	41	517	89	. .
Totals	91	3365	7654½	258,912	7986	12,550	6245	6074

The two last on the list are farms worked by separate farming societies, all the others are farms attached to stores. The large amount of capital invested is due to the freeholds having been frequently bought by co-operative societies as investments for their surplus capital. The totals show that over ten thousand acres are now farmed co-operatively and over a quarter of a million of capital is invested in the farms. The results vary very greatly, the losses on balance nearly equalling the profits.

Simultaneously with this development of farming enterprise inside the co-operative movement, a considerable number of profit-sharing and co-operative experiments have been set on foot by landowners and farmers, like Earl Spencer, Mr. Boyd Kinnear, and Lord Wantage. The latter was stated to have taken 20,000 acres of land into his own hands and adopted a plan of working it upon a system of association with the labourers which paid him good interest and yielded them about £2 each of dividend on labour. The results were described in glowing terms by the *Daily News* commissioner, whose letters have been published in book form (see *Life in our Villages*, Cassell and Co., 1891). In part iv. of volume ii. 3rd series of the *Journal of the Royal Agricultural Society* (31st December 1891) Mr. Albert Grey reported a most successful effort at co-operative farming carried out by him in Northumberland, on the large scale

of 3765 acres, of which 1290 are permanent pasture and 2475 arable. In 1886 he commenced on the Home Farm at Hawick, and in the next four years was able to pay the labourers three annual bonuses of 6d. in the £ on their wages. The same year he applied the profit-sharing plan to the East Learmonth farm of 821 acres, of which all is arable but 122 acres. In the case of this farm the outgoing tenant had refused to continue his tenancy unless he were allowed a reduction of 20 per cent in his rent. Mr. Grey had been able to earn the old rent under the profit-sharing arrangement and also interest on capital. In addition he had paid the labourers three annual bonuses, viz. one of 1s. in the £, one of 1s 1½d., and one of 1s. 3d. Mr. Grey adopted the formula for division of profits carried out by M. Godin of Guise in his celebrated co-operative workshops (see CITÉ OUVRIÈRE). Interest on capital ranks as equivalent to wages of labour for a *pro rata* division of profits (see *Co-operative Traveller Abroad*, Labour Association, London, 1888). On the additional area of land which Mr. Grey placed under the profit-sharing system in 1888, he was sanguine of making a profit, and his whole paper was filled with interesting details of economies effected and improvements obtained by the reconciliation of interests of employer, managers, and labourers. Mr. Albert Grey subsequently became Earl Grey, taking an active part in public life as Governor General of Canada and in other capacities which absorbed his time and attention. In view of the recent revival in agricultural prosperity it seems evident that the time is ripe for the application of co-operation to farming, and it only requires the evidence of a few successes on a considerable scale to bring about a great extension of the movement. E. O. G.

It has been proposed (1911) by the Board of Agriculture, to spend £20,000 through the County Councils on behalf of Agricultural Co-operation.

CO-OPERATIVE WORKSHOPS. In the article on CO-OPERATIVE ASSOCIATIONS the general fact is stated that productive co-operation has developed much more slowly than distributive co-operation. In earlier days the failures of co-operative workshops were so numerous that many writers held that co-operation had been proved to be inapplicable to manufacturing. Professor Beesly, in a pamphlet on *The Social Future of the Working Class* (Reeves and Turner), 1868, stated: "I believe there is not in England at the present moment a single co-operative society in which workmen divide the profits irrespective of their being shareholders," and he concluded that "we must look for improvement not to this or that new-fangled industrial system, but to the creation of a moral and religious influence which may bend all in obedience to duty. When we have created such an influence we shall find that it will act more certainly and effectually on a small body of capitalists than it would on a loose multitudinous mob of co-operative shareholders." So far as this was a statement of facts it was too sweeping. Mr. J. S. Mill, Professor Fawcett, and other economists could see even then some favourable features in the struggling experimental attempts at workshop co-operation. Upon these and upon confidence in general principles they based very hopeful forecasts of the future, and the latest facts and figures seem to justify their views.

Comparing the returns issued by the Co-operative Union for 1909 with those issued for 1889, the following figures show that progress is becoming more rapid as the feeling grows that the initial difficulties have been overcome :—

	1889.	1909.
Number of Co-operative Workshops	106	121
Number of Members	25,728	31,806
Share Capital	£714,189	£858,039
Loan Capital	£274,784	£3,877,654
Reserve Funds	£28,469	£151,291
Total Funds	£1,017,442	£2,886,984
Sales	£2,308,028	£11,714,918
Profits	£118,355	£445,214
Losses	£5,581	£6,218
Net Gain	£112,774	£438,996

If a comparison is made between the latest figures for 1909 and those for 1889, it will be found that the percentages of increase in 20 years have been as follows—in number of workshops, 14·15 per cent; in members, 23·62 per cent; in share capital, 24·34 per cent; in business, 407·57 per cent; and in profits, 276·16 per cent. These figures show that whilst there has been an increase of new societies (possessing of course fewer members than the older ones), the established societies have increased their capital, and have even more rapidly gained in trade and in the power to make profits. If a further comparison is made of the growth of the co-operative workshops as compared with the growth of the co-operative movement generally, it will be seen that the productive side of co-operation is now distinctly vigorous and is probably absorbing the most energetic and capable co-operators. The following were the percentages of increase of the co-operative movement in 1890 over 1888—in number of societies, 3·48 per cent; in members, 12·55 per cent; in share capital, 17·97 per cent; in business, 17·59 per cent; and in profits, 22·13 per cent.

Two kinds of workshops are included in the figures quoted above from the annual returns of the Co-operative Union, viz. workshops which divide their profits only between capital and custom, and workshops which admit labour also into partnership. Repeated resolutions have

been passed by large majorities of delegates at annual co-operative congresses affirming that the true principle of co-operation in production requires the co-partnership of labour. But the Central Co-operative Board, which is the executive of the movement, is reluctant to exclude from recognition the large workshops which belong to the Co-operative Wholesale Society, and those corn mills belonging to stores which violate the principle laid down by congress. The burning question of the movement has been whether the inclusion of the worker to share in profits and management is essential or not. As the promoters of industrial co-operation are generally agreed that nothing short of the partnership of labour with capital will finally reconcile the two interests and end conflict, public interest naturally centres most around the workshops in which co-partnership exists. According to the annual reports and other publications of the Labour Co-partnership Association (of 6 Bloomsbury Square, London) the co-operative workshops which recognise the principle of profit-sharing with labour now number one hundred and twelve, and are therefore in a majority. Eight or nine of them have been in existence over forty years. They are established in almost all parts of the kingdom and in about forty different trades. The number of workers employed is between four thousand and five thousand. The Labour Co-partnership Association, which devotes itself especially to the establishment and welfare of these profit-sharing societies, holds exhibitions of their productions, and the goods shown are said to be very excellent and tasteful. The practicability of successful manufacturing on co-partnership lines may therefore be considered to be established.

The absence of strikes seems to be satisfactorily assured. Where strikes have been made public in connection with "co-operative" workshops they have been in factories which exclude the workers from participation. Only one small conflict is known to have occurred at a profit-sharing workshop, and that was promptly settled.

The amelioration of the social position of the workers cannot be wholly stated in figures, The addition to the wages in the shape of "bonus" or "dividend on labour" varies very greatly, but appears to average 11¼d. in the £, or rather under 5 per cent on wages. But only a portion of the effect of profit-sharing can be seen in this item. It is stated by Mr. Joseph Greenwood, the late manager of the Hebden Bridge Fustian Manufacturing Society in Yorkshire, that whilst profit-sharing with them added only 9d. in the £ to wages, the average-income of their workers (men, women, and children) had been increased in twenty years from about 12s. 6d. per week up to over 17s. per week, the chief increase being due to regularity of employment and saving of lost time. Fustian cutting was originally a sweated industry, but the society at Hebden Bridge now employs 296 workers, all of whom are shareholders. They own £9132 of the capital stock, which amounts in all to £29,615. That the condition of these workers must have been greatly improved beyond the amount of "bonus" distributed is evident from the fact that the latter has only totalled about one-third of the sums invested by the workers in their society. The Labour Co-partnership Association, moreover, adds that the societies which have been formed in recent years since it has been at work have almost all been induced to adopt rules which make provision for many excellent common funds. Thus the Leicester Co-operative Boot and Shoe Manufacturing Society when dividing £240 of surplus profits (realized during a quarter-year) apportioned the sum thus: to reserve £40; to the workers (10½d. in the £ on wages), £80; to the committee (who are nearly all workers in the factory), £24; to the educational fund, £10; to the provident fund, £20; to the special service fund for rewarding inventions and economies, £6; to capital (in addition to 5 per cent), £20; to customers (2¾d. in the £ on purchases), £40. In this case the 10½d. "dividend on wages" formed but a third portion of the whole benefits.

The increase in the productiveness of labour under co-partnership rules seems very clear. The Agricultural and Horticultural Association commenced some years ago to manufacture oilcake for cattle, putting down machinery calculated to produce 35 tons per week and subsequently adding other machinery calculated to produce 60 tons per week. At first the new employés, unfamiliar with the profit-sharing system of the Association, only produced 21 to 26 tons off the first machinery and about 48 tons off the second. But, under the stimulus of "bonus" the first set of machinery now produces 57 tons per week and the second set produces about 76 tons per week. The difference in output converted a loss into a profit for the Association, whilst the average remuneration of the workers (men and youths) went up from £1 : 0 : 7 per week to £1 : 6 : 8.

The result upon the position of capital in these workshops has been to substitute a safe and steady reasonable dividend for a higher but fluctuating one. As the societies attain success they decrease the dividends on capital instead of increasing them. Several leading workshops have recently done so, including the Hebden Bridge Fustian, Leicester Hosiery, Manchester Printing, Edinburgh Printing, and Paisley Shawl Manufacturing. The majority of shareholders, being customers and workers, attach most importance to the dividends on custom and on wages, and decrease the dividend or interest on capital to increase these. But this does not appear to check the inflow of in-

vestments, as the dividend or interest on capital is a first charge on the whole profits. These being swelled by the stimulus given to custom and zeal of the workers, the dividend on capital assumes almost the safe position of a first mortgage, and 5 per cent is found amply sufficient to attract funds. E. O. G.

CO-OPERATION, PARTIAL (OLDHAM COTTON-SPINNING COMPANIES). The term "partial co-operation" is applied by Prof. Marshall (*Principles of Economics*, vol. i. p. 364, 2nd edition) to such partial applications of the co-operative principle to production as (*a*) profit- or profit-and-loss sharing (see PROFIT-SHARING), (*b*) the Leicester boot works and other similar productive establishments owned by the main body of co-operative stores through their agents the wholesale (see CO-OPERATION and CO-OPERATIVE WORKSHOPS), and (*c*) certain joint-stock cotton-spinning companies in Oldham and its neighbourhood. These last are owned by combinations of small capitalists, among whom are many workpeople with a special knowledge of the cotton industry, though few of the companies' employés can describe themselves as "their own masters." It is customary, but incorrect, to call these concerns "co-operative mills," and to say that many of them are owned by the working classes. It is, however, true that the foundation of a number of the Oldham "Limiteds" was due to an attempt by working men to apply the co-operative principle to production. The early history of the Sun Mill Company is typical of the whole movement in its initial stages, and throws much light on the difficulties attending even a partial application of such a principle to a highly organised industry.

The "Oldham Building and Manufacturing Society," the first of its kind registered under the Joint-Stock Companies Act, was founded in 1858: capital £1000 in £5 shares. The promoters were members of the Oldham Industrial Co-operative Society. Calls on shares were to be 3d. weekly, and the directors were paid 6d. a week for their services. Several months elapsed before all the shares were taken up, and a longer delay occurred before the society's business, weaving, could begin. At the end of the first quarter's working, a dividend of 7½ per cent was paid, but afterwards the looms were run at a loss. The difficulty of disposing of the manufactured goods, disputes among the directors, and between the shareholders and non-shareholders employed by the company, and above all the unsuitability of the climate for weaving led to this result. It became necessary to make a radical change in the scheme, and accordingly the promoters decided to increase the capital to £14,870, and build premises for cotton-carding and spinning. The engines were "christened" in 1863, and under the new name of the "Sun Mill Company," business was carried on through the period of the Cotton Famine (see COTTON FAMINE) eventually with considerable profit. But, in 1867, Mr. Gladstone, visiting Oldham, was officially informed that out of more than a thousand shareholders, only four were also the company's employés, and that it was difficult to persuade workpeople to buy shares. In 1868, in order to ensure loyalty to the company's interests on the part of its principal servants, their salaries were reduced, and instead a bonus—a percentage,—was given on all profits over 10 per cent on the capital. The directors at one time desired to extend this system of profit-sharing to the operatives, but were strenuously opposed by the principal servants, and eventually, as the bonus was found not to have the desired effect, the directors went back to the old arrangement of fixed salaries. Since then the history of the concern, which in its early years had shown "much experimental enterprise but a want of judgment as to consequences," chiefly deals with the struggles of a young business to extend its connection. During the twenty years 1858-1877 £8 : 10s. was paid in dividends on the £5 share.

[*The Sun Mill Company, Limited*; *its commercial and social history*, by William Marcroft, Oldham, 1877. The same writer, in a pamphlet entitled *A Co-operative Village*, and published at Oldham in 1878, propounds a scheme of partial co-operation by which a small settlement could attain a kind of "industrial independence."]

It was hoped that the Limited Liability Act (see LIMITED LIABILITY ACTS) would encourage the labouring classes to invest their savings in manufacturing ventures; in Oldham and its neighbourhood the example set by the promoters of the Sun Mill Company was in several cases followed by working men. But the movement soon passed out of their hands, and losing its co-operative aspect, degenerated into a system of company promoting by outside speculators. Owing to the presence of great machinery works in the town a factory could be built there and fitted up with the newest machinery at the smallest possible cost. As a rule the buildings were mere "shells," so arranged as to hold mules with a very large number of spindles. During the fifteen years after the passing of the above-mentioned act the total number of spindles in Oldham, then as now the headquarters of cotton-spinning, was nearly doubled. In 1886, according to the official list, seventy-seven mills (average age nine years) contained 5,166,922 spindles, whose balance-sheet value was over five million pounds; at present there are more than a hundred, whose shares are quoted in the official list. The majority have at one time or other paid very large dividends.

Of late the Oldham "Limiteds" (see Mr Albert Simpson's "statement respecting the

Cotton Mills of Oldham, and the working of the Limited Liability Act in connection with them," handed in to the Labour Commission, group C, 10th July 1891) have been charged with omitting to write off enough per annum for depreciation, so that their large dividends are, in part at least, paid out of capital. In many cases there is evidence to warrant such a criticism; out of a hundred and ten concerns the shares of sixty-seven, many of which pay large dividends, are at a discount. The appointment of government auditors under the Limited Liability Act has been suggested as a remedy.

Again, it is certain that "divi-hunting" has forced many of them into rash speculation, and led to a serious loss of financial vitality. During 1890, to defeat attempts to "corner" cotton at Liverpool, many of their "buyers" bought cotton "to arrive" throughout the year; and, as a consequence of the sharp fall in 1891, the legitimate profits of cotton-spinning were swallowed up by the losses due to cotton speculation. Workpeople are not disposed to risk their savings in this manner, and though, in the case of the older and more stable concerns, conducting their business on sound principles, and setting aside a yearly sum to pay for renewal of machinery, etc., a small percentage of the shareholders are retired workmen, and a few even employés of the company in which they hold shares, generally speaking, the Oldham "Limiteds" are not even "partially co-operative." E. B. O.

Social Aspects of Co-operation. The statistical information conveyed in the official reports of the Registrar of Friendly Societies and of the United Board of the Co-operative Union, whilst it furnishes very complete particulars as to the financial side of the co-operative movement, affords no sufficient criterion as to the social side. That provision is made for the social and educational development of co-operators may, however, be gleaned from those sources. Thus in the year 1909 the sum of £91,070 is stated to have been applied by co-operative societies to educational purposes, whilst the sum of £10,580 : 8 : 11 was voted to the maintenance of the Co-operative Union, whose work is entirely of an educational character. The money spent upon education goes sometimes to lectures and classes, but more often to keep up reading-rooms and libraries, which in the northern counties are usually to be found in connection with the stores. Social gatherings and entertainments also come in for a share of the educational grants. In addition to supporting university extension lectures in several centres, co-operators have founded two scholarships at Oxford, the Hughes and the Neale, to commemorate the services rendered to the movement by Mr. Thomas Hughes and Mr. E. Vansittart Neale The development of the social side of the co-operative movement is promoted by an effective system of district and sectional organisation. Delegates are periodically brought together by this means to discuss the welfare of their movement, and much propagandist work is done. Once a year the Co-operative Congress is held, at which co-operators meet from all parts of the United Kingdom. "The annual congress is composed of delegates from societies in union, each society being entitled to send one delegate for each annual subscription of 1000 d. or fractional part thereof. Business of the congress: There is first the inaugural address, then the report of the Central Co-operative Board, the election of scrutineers, of the voting for the new central board, and the discussion of papers and proposals bearing on co-operation" (Acland and Jones, *Working Men Co-operators*, p. 111). Co-operators recognise that their business system depends largely upon the progress of mutual improvement amongst their members, and they are constantly urging that more attention should be paid to the special training of co-operators. "We regret to find that educational grants do not keep pace with the general growth of the societies. Our opinion is that *it will pay every society* to devote at least 2½ per cent of its net profits to education, and that though societies may and do succeed without this, yet it is because the older generation still lives and guides them, but when the day arrives that they no longer take part in their management, the societies will run a great risk of suffering thereby" (*Co-operative Wholesale Societies' Almanac, 1883*, quoted in *Working Men Co-operators*). It is, however, by the daily routine of co-operative transactions that the social life of the movement is chiefly fostered. To regard the mechanism of the movement as simply an adaptation of "shopping" is to completely misapprehend its character. Equally erroneous is the superficial estimate of the store system as a form of "joint-stockism." The store, it is true, contains the stock-in-trade of the shop, but its social significance lies in its being the centre of a consumer's league, the organised expression of a social standard of requirements. As a domestic depôt or repository, the store has played an important part in the growth of neighbourly feeling. By affording opportunities for social thrift as well as consumption, it enters into the everyday economy of families connected with it, in many instances supplying the house itself, as well as the furniture, clothing, and food requirements of the inmates. The Women's Guild recognises the influence of women in the co-operative movement, for though only established a few years, it has done much to educate them in the responsibilities of organised purchasing.

The constitution of the co-operative society is, after all, the best guarantee of its social

character. If that constitution were of a merely joint-stock character, as is so commonly alleged by critics of co-operation, we should expect to find people going into the movement for the acquisition of shares, and using their position to enhance the value of, and increase the return upon, their holdings. This, however, does not happen. The shares in a store yield a stereotyped return of 5 per cent, sometimes less, and there is never a market, in the recognised sense of the term, for co-operative shares. When shares change hands they do so usually at par. The share list is never closed to new comers. "This open democracy of a million souls," to quote Miss Potter (Mrs. Sydney Webb) in *The Co-operative Movement in Great Britain*, is open to all comers. The holder of the maximum allowed by law (£200) has just as much power as, and no more than the shareholder with two or three pounds. Thus we find none of the characteristics usually associated with the joint-stock system in co-operation. Instead of a trading concern in which the lion's share in the direction of the revenue goes to the large stockholder, the power is equally apportioned to all the members, and the dividend is proportioned to the use made of the store (dividend on Purchases.)

Just as individuals have formed societies for distribution and saving on a mutual basis, so the societies themselves have united in order to perfect and consolidate the co-operative system.

The English Co-operative Wholesale Society, enrolled in 1863, has grown into an organisation of enormous power; the notable point in this connection, which is dealt with very fully in Miss Potter's book, being the social influence which this great federal institution, in common with its sister society in Scotland, has exerted. These federal institutions, while allowing free play to local activity, keep up a constant healthy circulation of ideas and commodities between the societies federated. Villagers and townsmen gather at the delegate meetings to transact the affairs of "the Wholesale." The best experience and information of the central institution is placed at the service of the most insignificant society. Just as the trade union and the friendly society have passed through the stages of scattered and isolated local effort into national associations, so has co-operation; and to the federal development of the movement may be ascribed much of the steady and uniform rise in the standard of requirements noticeable in the co-operative movement (see Miss Potter's book). Nowhere can this be more clearly perceived than in those districts where the stores have remained outside the federal body. The county of Forfar, for instance, has held aloof almost entirely from the Scottish Wholesale Society, and inquiries made throughout the district show that co-operation has stood still in consequence during the past thirty years, each society in its own rut, whilst the standard of demand is lower than within the federation. The federal principle has been largely applied to the business of corn-milling, the price of bread in districts where co-operation is strong being frequently set by the joint agency of the mill and the store. It happens also, frequently, that instead of the store taking the current prices of the neighbourhood for its goods, it has come to set them for the district. Productive departments have been established on a large scale in connection with the two wholesale societies, and production is now carried on in many directions for use direct and not for profit, none of the commodities of the wholesales being sold outside the circle of the stores.

The Co-operative Wholesale Society Ltd. gives its name to the Bank of the Association. The Head Office is in Manchester. It was established in 1873. The Bank had in 1910 a paid-up capital of £1,709,657, Loan Capital £3,091,174, deposits, etc, £1,650,532 and 1160 Shareholders.

It is frequently stated in detraction of the co-operative movement that so far from being a social organisation it is mainly composed of self-seeking persons, devoid of public spirit, and intent upon personal acquisition. The advocates of co-operation do not, however, claim that their system is regenerative, though they maintain, as it would seem with reason, that the advantage of the individual can only be secured by the welfare of those associated with him. Seeing that the co-operative body now numbers two and a half millions of associates, it would appear that a considerable number of those enrolled must contribute their quota of public work. Otherwise instead of continually increasing prosperity we should find corrupt and self-centred societies partaking of the propensities of members whose only thought was for themselves. But little inquiry is necessary to show that in this movement a large and increasing body of enthusiastic and efficient persons are continually devoting themselves to the furtherance of its principles. In no other movement is there so much hard and thankless voluntary work done for the love of the thing as in co-operation.

Profit-sharing industrial partnership has recently developed greatly in the form of Co-partnership (see Appendix). This is largely due to the late Sir George Livesey of the South Metropolitan Gas Company. The basis of the system is a bonus on salaries and wages, and the objects are to give all officers and workmen an inducement beyond their salaries and wages to take an interest in their work and the welfare of the company which employs them besides the opportunity of becoming shareholders in that company, and thus, by becoming owners of property, to improve permanently their position in life. The co-partnership bonus is calculated annually on the

salary or wages for twelve months. The offer to be made to every official and workman of the company in regular employment, the condition of acceptance being the willingness to sign an agreement, which agreement binds the company to provide work for twelve months. The principle is already adopted by twenty-six gas companies of the United Kingdom, with capitals of nearly forty-five millions, and many other firms.

[Acland and Jones, *Working Men Co-operators.* —Beatrice Potter, *The Co-operative Movement in Great Britain.*—*Annual Report of the Co-operative Union.*—*Annual Report of the Registrar of Friendly Societies.*—Sedley Taylor, *Profit Sharing.* —*Co-partnership*, pub. by Co-partnership Publishers Ltd., 6 Bloomsbury Sq., London.] V. N.

COPARCENERS. Persons to whom lands of inheritance descend jointly. For instance at common law, when an ancestor dies seised of land in fee simple or in fee tail, and his next heirs are two or more females, they will take an equal interest in the land. Under the custom of GAVELKIND (*q.v.*), which prevails in Kent, lands descend to all the males in equal degree. Coparceners take a distinct share in the land and can compel partition.

[Stephen's *Commentaries*, bk. ii. pt. 1.]

J. E. C. M.

The real property of a person dying intestate generally goes to one heir; but in some cases several persons are coheirs, and are then said to take as coparceners. This occurs (1) at common law when the persons entitled by descent are females (the rule of primogeniture applying to males only); (2) in the case of lands held under the custom of gavelkind, the males of the same degree of relationship (in so far as they are otherwise entitled) take as coparceners. There is no right of survivorship between coparceners—a circumstance which distinguishes the tenancy of coparceners from joint-tenancy (cp. *Joint-Ownership*). E. S.

COPERNICUS, NICOLAUS (1473-1543). This great man has a place in the history of political economy in virtue of his tract *Monetæ Cudendæ Ratio*, written in 1526 by desire of Sigismund I., king of Poland, as a re-statement of the principles previously explained by the author at the Prussian Landtag of 1522 as those on which the reform of the currency should be based. The conditions on which he insists are—strict integrity in the weight and quality of the coin, the charge of a seigniorage just sufficient to defray the cost of mintage, and a unity of the monetary system throughout the entire state. There is, with much that is sound, some admixture of error in the tract. It was first published by Benkowski in 1861 and afterwards, in conjunction with the treatise of Oresme, in 1864 by Wolowski (Roscher, *Gesch. der Nat. Oek. in Deutschland*, p. 111). J. K. I.

COPLESTON, EDWARD (1776-1849), born at Offwell in Devonshire, educated at Oxford, he became provost of Oriel, 1814. He was the champion of Oxford University against the attacks made against it in the early numbers of the *Edinburgh Review*; and it was as "one of his constituents," that he wrote his chief economical treatise, his two "Letters to the Right Hon. Robert Peel, M.P. for University of Oxford, on the pernicious effects of a variable Standard of Value, especially as it regards the condition of the Lower Orders and the Poor Laws" (1819). He became Dean of Chester in 1826, and succeeded Sumner as Dean of St. Paul's and Bishop of Llandaff in 1827. He was an occasional writer for the *Quarterly Review* (see list of his works in *Memoir*, pp. 346-7). Though chiefly known as a theologian and ecclesiastic, he took part in the economical and political controversies of his day; his Oxford Prize Essay (1796) on "Agriculture" shows that his attention was early directed to the topics afterwards treated in his "Letters to Sir Robert Peel."

In the first of these Letters (which bears the motto "laissez-nous faire") he states the doctrine of currency which (he says), though "only a question of simple arithmetic," yet affects "all the most valuable interests of life." He gives illustrations, from English history, of what has happily been called by some later writers the "secular" depreciation of the currency (or its depreciation over a long period of time), and points out how very gradually and unequally prices adapt themselves to the change. As in retail dealings and in transactions between non-commercial people competition acts much less promptly and effectively than in dealings between merchants, so its efficacy is very imperfect in case of the agricultural labourers, as distinguished from the mechanics of the cities; they are quite unable to make their wages keep pace with any depreciation of money or rise in the price of food. "At no period of our history *till the present* was the condition of the labourer so bad as in the time of Elizabeth." Rather than raise the labourer's wages, the farmer will let him "come on the poor rates." Now the causes of depreciation may be the natural progress of trade and the discovery of mines; the distress is in that case unavoidable, and every civilised nation will at one time or other pass through the experience. But the depreciation may be due to artificial and preventible causes; and this is our own case, in 1819. We have ourselves to blame; and we ought to apply the cure. We should restore our currency to its old basis, and put an end to the suspension of cash payments. Copleston throughout follows the leading of Ricardo, Huskisson, and Canning against Bosanquet, Vansittart, and the opponents of the bullion committee.

In the second Letter he discusses what steps should be taken to secure that the

return to a more normal currency and low prices shall be as far as possible equable in its effects on all classes. The new corn law was meant to give to the agriculturists the supposed advantages secured to commercial men by restriction; but it would be better, he thinks, to dispense with both of them and return to our normal condition. Then he goes at some length into the question of the relief of the poor, discussing what government can and cannot do in this matter, what our own government had done, and, finally, what it ought to do. He considers that Malthus (whom he otherwise warmly praises) has not done full justice to the English Poor Law. Till lately, according to Copleston, this law was so well administered as to preserve life without encouraging the propagation of it. An historical review of the legislation in regard to the poor in England is made to support his view that depreciation of the currency has been a potent cause of distress to the poor, and unfair gain to their employers. His own recommendations are stricter than his criticisms of Malthus might have led his reader to expect. "Legal relief is necessarily of itself encroaching and unsatiable." He appeals to employers to raise wages without waiting till they are compelled; but (he believes) in any case the march of events will so lessen poverty that it will not be true of England as of India and China that its only source of wealth is its "redundant supply of human labour."

Copleston's article in the *Quarterly Review* (for April 1822), on the state of the currency, would lead him to be classed among the ultra-bullionists, who attributed more influence to the suspension of cash payments than the facts would justify. It is criticised by Tooke in his *Thoughts and Details on High and Low Prices*, (part i. pp. 19, 43, *seq.*, 1823); and Ricardo includes him among the adversaries who "put sentiments in my mouth that I never uttered" (letter to Malthus, 16th Dec. 1822). But, like many other of the minor economists, he did service by drawing attention to particular points that had been comparatively neglected by the more prominent writers.

[W. J. Copleston, *Memoir of E. Copleston, Bishop of Llandaff, with Selections from his Diary and Correspondence* (London 1851).—See also Mozley, *Reminiscences of Oriel College*, 1883.]

J. B.

COPPER MONEY (ENGLAND). This metal was first used for coinage in England in the reign of James I., when, under the authority of a patent granted by the king, Lord Harrington of Exton caused copper *Farthings* to be struck and put into circulation. These pieces, known as "Harrington tokens," weighed only six grains.

Copper Halfpence were first issued in the reign of Charles II., and

Copper Pence in that of George III. (1797).

Copper Twopences were issued at the same time as the first coinage of pence, but they were found to be inconveniently large and heavy (2 oz.), and their coinage was not continued.

Copper Half-farthings for circulation in England were first coined in the year 1843. The last issue of coins of this denomination bears the date 1856.

The following is a list of the denominations of copper coins issued for circulation in England since the reign of James I. :—

James I.	Farthing.
Charles I.	Farthing.
Cromwell.	Farthing.
Charles II.	Halfpenny, Farthing.
William & Mary.	Halfpenny, Farthing.
William III.	Halfpenny, Farthing.
Anne.	Farthing.
George I.	Halfpenny (125 grs.), Farthing (62·5 grs.)
George II.	Halfpenny (152 grs.), Farthing, (76 grs.)
George III.	(1770)—Halfpenny (152 grs.), Farthing (76 grs.) (1797)—Twopence (875 grs.), Penny (437·5 grs.) (1799)—Halfpenny (194·5 grs.), Farthing (97·2 grs.) (1806)—Penny (291·7 grs.), Halfpenny (145·8 grs.), Farthing (72·9 grs.)
George IV.	Penny (291·7 grs.), Halfpenny (145·8 grs.), Farthing (72·9 grs.)
William IV.	Penny (291·7 grs.), Halfpenny (145·8 grs.), Farthing (72·9 grs.)
Victoria.	Penny (291·7 grs.), Halfpenny (145·8 grs.), Farthing (72·9 grs.), Half farthing (26·5 grs.)

In 1860 copper was superseded by bronze for the manufacture of pence, halfpence, and farthings; the old copper pieces being demonetised by royal proclamation of the 13th May 1869. They were, however, exchanged at the Mint for their full nominal value until the year 1873.

The weights of the bronze coins are as follows :—

Penny, 145·83 grs.
Halfpenny, 87·5 grs.
Farthing, 43·75 grs.

Farthings made of *tin* were struck in the reigns of Charles II., James II., and William & Mary; halfpence also were made of that metal in the two last-named reigns. F. E. A.

COPPER MONEY (SWEDEN). (*Copper plates or blocks used as money in Sweden.*) From 1644 to 1776 there was in Sweden a cumbersome form of copper currency. It consisted of thick square plates (plåtar) of pure copper of various dimensions and weights, the largest weighing as much as 17 kilogrammes (or 37½ lbs. av.) The nominal value in silver dalers, with the year of its issue, etc., was stamped in the corners and in the centre of each plate. The reason which led to the adoption of this form of currency was a desire to benefit the native copper mines, a feeling analogous to that which at the present date (1891) has greatly promoted the coinage of silver money in the United States.

By the law of 1644 one skeppund of copper (170 kilogrammes or 374$\frac{3}{4}$ lbs. av.) was coined into a number of plåtar equal in total nominal value to 69 silver dalers. In the hope, however, of adding to the wealth of the nation, laws were passed in 1674 and 1715 which directed that the stamps on the blocks should be altered so as to cause them to pass at a higher nominal value than before, the number of silver dalers represented by a skeppund of copper being increased in 1674 to 100, and in 1715 to 180. The latter rate was maintained until 1776, when, by a new coinage law, the plåtar were demonetised, and ceased to form any part of the Swedish currency.

After 1715 one plåt was reckoned as equal to two silver dalers, or $\frac{4}{9}$ of a Rixdaler. This would be equivalent to 2$\frac{2}{3}$ crowns of the present gold standard, which are equal in sterling to 2s. 11$\frac{1}{4}$d. The weight of one plåt at the valuation of 1715-1776 would therefore be (170 kilogrammes ÷ 90) 1·88 kilogrammes or 4 lbs. 2 oz. av., while the nominal value of the largest plate, weighing 17 kilogrammes (37$\frac{1}{2}$ lbs. av.), would be eighteen silver dalers, equal to twenty-four of the present gold crowns, which amount in sterling to £1 : 6 : 5.

For a long time these blocks of copper formed the chief medium of exchange in Sweden (so far as metal was concerned), and as they were very unwieldy, merchants were often obliged to obtain a wheelbarrow when they had to pay or receive any large sum of money. The inconvenience of employing this form of money appears to have led to its disuse.

In Italy, Mommsen (*Hist. of Rome*, vol. i. p. 458, ed. 1864) says, "there seems from the first to have been a fixed ratio for the relative value of copper and silver (250·1)." F. E. A.

COPYHOLD. Land forming part of a manor and subject to certain burdens in favour of the lord. The tenants' rights are derived from "the custom of the manor," the lord being still looked upon as the feudal possessor of the land, hence he is entitled to all mines and minerals under the land, and to all timber growing upon it. The new tenant is admitted in the lord's court—the court baron—and his admittance entered on the court roll, the copy of which is evidence of his title—hence the expression "copyhold." A series of copyhold enfranchisement acts were passed from 1841 onwards. That of 1894 repealed former acts and consolidated and improved the law. Copyholds were abolished and the lands enfranchised and made freeholds by s. 128 of the Law of Property Act 1922, c. 16, saving the manorial incidents of rents, fines, reliefs, heriots and dues, forfeitures (other than those for conveying the land as freehold or alienating without licence), and timber rights. Dower, freebench, and curtesy are saved in marriages before the commencement of the act where the beneficiary dies before that date. Existing mortgages are converted into terms of years absolute. Commonable rights are also saved and the rights to minerals. The act should commence on January 1, 1925, unless postponed.

COPYRIGHT. Copyright is now governed by 5 & 6 Vict. c. 45 and subsequent amending acts, the last of which (1911) extends to the British Dominions.

(1) *Literary Copyright.* Original books, including pamphlets, lectures, sheets of music, reproductions of music by mechanical methods, films, musical "records," maps, charts, plans, translations, etc., are protected for the author's life and for fifty years after; except that if, after the author's death, a work is unfairly withheld or the price unduly raised, a special license may be granted for its publication or performance on reasonable terms. Libellous and immoral publications are not protected by copyright. Newspapers under some circumstances may be within the acts. The first publication of the work must be within the United Kingdom or such part of the British Empire to which the law applies. Aliens resident in such parts of the Empire enjoy the same protection.

(2) *Dramatic Copyright.* Plays and musical compositions are protected for the same period as books, but the time runs from the publication or representation, whichever happens first. To dramatise a copyright book is an infringement.

(3) *Works of Art.* By the act of 1911 works of art were included for the first time in the same arrangement as literary works.

(4) *Designs.* Original designs used in manufacture for fabrics, etc., may be registered and protected under the Patents and Designs Act 1907, and the Trade-Marks Act, 1905.

(5) *Copyright in United States.* In the United States the acts of 1909 and 1919 protect literary, artistic, and musical productions, for twenty-eight years, with a renewal for a further period of twenty-eight years to the author or his heirs. Aliens can enjoy this protection if domiciled in the United States when the work is first published, or if the foreign states to which they belong grant reciprocal protection to subjects of the States. The "manufacture" clause (act of 1891) requires that a book published in the United States should be printed there. The law of 1909 left this unaltered except in the case of books originally published in a foreign language. By Order in Council of Feb. 3, 1915, the British Copyright Act of 1911 was applied to the United States, except as to H.M.'s self-governing dominions. By the act of 1919, c. 11, interim protection is given to books first published abroad in the English language on or after the President's Proclamation of Peace on depositing in the Register of Copyright Office at Washington one complete copy with a request for the reservation of the copyright, stating name and nationality of the author and owner of the copyright and the date of first publication (together with a registration fee of $1). For full copyright the work must be set up and published in the States within 4 months of the deposit.

(6) *International Copyright.* By an act of

1844 authors of foreign nationality could be protected by British copyright provided (1) they complied with certain formalities, such as the registration of their works in England within a year of the date of publication abroad, and (2) that reciprocal protection is given to British authors in the countries of which they are subjects. It did not, however, confer on any foreign author rights greater than those he enjoyed in his own country. The system was improved by the International Copyright Act, 1886, and by the "Bern Convention," 1887, and the additional act of Sept. 9, 1897. These conventions were replaced by the Berlin Convention of 1908, applied to this country by the Order in Council of June 24, 1912, which in substance gives to the subjects of the acceding powers the British copyright, as if the authors were British subjects and the works produced in the British dominions. The scheduled convention gives reciprocal rights without any formalities. Among the acceding countries are Belgium, Denmark, France, Germany, Italy, Japan, Norway, Portugal, Spain, and Switzerland. This convention was completed by an additional protocol signed at Bern on March 20, 1914, which empowered union countries to restrict the rights of non-domiciled subjects or citizens of non-union countries on lines of reciprocity. Subsequent Orders in Council vary the above order as regards Italy, Morocco, and Sweden. The completed convention again came into full force with the Treaty of Versailles (see art. 286) and the other Peace Treaties.

(7) *Basis of Copyright.*—Blackstone (2 *Com.* p. 405), and other writers (Copinger on *Copyright*) adopting Locke's view of occupancy, incline to base the right of an author to the exclusive use of works composed by him on occupancy founded on personal labour. Judicial decisions incline to the economic view that a manuscript having value was a form of wealth, and should be protected like other property, Millar *v.* Taylor (4 Burr, 2362), Donaldson *v.* Becket (4 Burr, 2408), Jeffries *v.* Boosy (4 H.L.C. 867). Spencer (*Social Statics*, c. xi. § 1) holds that "a man may claim the exclusive use of his original ideas without overstepping the boundaries of equal freedom, it follows that he has a right to claim them, or in other words, such ideas are his property."

COQUELIN, Charles (1805-1852), born at Dunkirk, died at Paris. Beginning life in business (1839-44), he published a *Traité de la filature du lin* (Paris, 1845). Soon after, having joined the free traders in their campaign in favour of customs reforms, he wrote in the *Revue des deux mondes*, also in the *Journal des économistes*, to which he contributed many articles, on banks, commercial companies, railways, canals, conversion of the *rente*, the corn laws, the circulating medium, liberty in commercial matters, etc. He superintended up to his death the publication of the *Dictionnaire de l'économie politique* of Guillaumin (1852-53). His principal work, *Du crédit et des banques* (Paris, 1848, 1st ed.; 1859, 2nd ed.), still remains, though some of the details are out of date, one of the ablest arguments in favour of freedom for institutions of credit and circulation. A. C. f.

CORBET, Thomas; wrote—

An Inquiry into the Causes and Modes of the Wealth of Individuals, or the Principles of Trade and Speculation Explained (London, 1841) sm. 8vo.

The author, claiming for himself only that degree of originality which Newton evinced when he explained the most ordinary transactions, such as plumbing and weighing, assigns as the "distinguishing principle of trade" though "not noticed by Adam Smith"—to *buy and sell always at the market price.* "Many other principles," as the author says, "will be found to be as novel."

F. Y. E.

CORBETTA, Eugenio, author of *Conferenze popolari di economia pubblica e sociale*, Milano, 1872, Dumolard. M. P.

CORN LAWS. A corn law is an expedient adopted by the legislature, with the object of securing a higher price for the cultivator, and a higher rent for the landowner. It takes two forms. One, and the most familiar, is a tax or prohibition on importation. The other is a bounty on exportation. The first corn law of the former kind in the English statute book is one enacted 3 & 4 Edward IV. The only law of the latter kind is the famous Bounty Act of William and Mary, enacted in 1689 (1 W. and M., s. 1, c. 12). The act was extended to Scotland by 5 Anne c. 8, and was slightly modified by 13 Geo. III. c. 43.

Acts of the sovereign, probably by the advice of the council, prohibiting the export of corn, with the view of distressing the king's enemies or of preventing scarcity at home, are of early and frequent occurrence in English history. But they are temporary, the expedients of military policy, or of a feeling that it was the first duty of a sovereign to assist in procuring plenty at home, and were not intended to promote the interest of either cultivators or landlords. These restraints were constantly enforced by severe and even savage penalties.

The preamble of the petition on which the act of Edward IV. is founded (Rolls of Parliament, v. p. 504), asserts that "husbandmen and occupiers in husbandry are sore hurt by the bringing of corn out of other lands and partes when corns of the growing of the said realm have been of easy price." Imports of wheat, rye, and barley are prohibited, unless the prices of these three kinds of grain are at 6s. 8d., 4s., and 3s. respectively the quarter. The corn thus imported is to be forfeited, half to go to the king, half to the informer. Prize of war, however, apparently (for the language of the petition is not very clear), is exempt from these provisions.

The year in which this act was passed was one of very low prices, for wheat was only 3s. 10½d., rye 2s. 10d., barley 2s. 4½d. the quarter. During the period before 1542, when prices began to rise permanently, *i.e.* for eighty

years (1462-1542), prices for twenty-three years only were above the rates, sometimes only slightly, so that one could hardly say that the act was very effectual in promoting its avowed object. Besides, for a very long time, acts of parliament were very imperfectly obeyed, perhaps hardly known to exist; and governments, even in the most despotic times, were very much alarmed at any discontent which might arise in case the price of food was artificially heightened. There are numerous statutes prohibiting the exportation of corn in times of real or apprehended scarcity.

Imported corn, like every other foreign commodity, was made liable to the charges which were imposed by Cecil (*see* BOOK OF RATES)—the constant subject of quarrel between the early Stuarts and their parliaments. Here, however, the maximum price at which imported wheat was freed from customs duty was 48s. a quarter. The average price of wheat during the 17th century was 41s. and nearly the whole century was a period of exceeding suffering to the poorer or labouring classes.

The real commencement of the system of imposing a scale of charges on imported corn, with a view to heightening prices and thereafter rents, was the sliding scale of 22 Charles II. c. 13. Under this law a duty of 16s. a quarter was imposed on wheat as long as it was at and below 53s. 4d. and of 8s. when the price was between 53s. 4d. and 80s. Other kinds of grain were similarly treated, for 16s. was to be exacted when rye was below 40s. barley and malt when below 32s. and peas and beans below 40s. Oats, when at 16s. and under, were to pay 5s. 4d. There was as yet no malt, but only a beer duty. Now during the 17th century, the average price of wheat was 41s., of barley 21s. 11¾d., of malt 23s. 7¾d., of peas 23s. 2¾d., of beans 23s. 1½d., and of oats 14s. 7¾d. I have not found the price of rye in sufficient frequency to justify an average. But the above figures prove that the intention of the act was to put a prohibition on the importation of food. It is true that when scarcities came, as in the seven years' dearth at the end of the 17th century, in 1709-10, in 1756, and on some other occasions, the act was suspended for a period, and, as Adam Smith says, "the necessity for these temporary statutes sufficiently demonstrates the impropriety of this general one." The act remained in existence as the ordinary corn law for more than a century, for it was changed only by 13 Geo. III. c. 43.

The sliding scale act of Charles II. was, as far as the realisation of its objects are concerned, a total failure. The price of wheat was generally low to the end of the century, for during the forty years 1663-1702 inclusive the average is 38s. 10d., this period including the so-called seven dear years 1692-1698 inclusive. Besides, the act was suspended as soon as it really came into operation. With rare exceptions too the harvests were exceedingly abundant well into the third quarter of the 18th century, average prices being constantly less than half the average rate of the 17th century. For this result there were two dominant causes. The first was the extraordinary geniality of the seasons. The second was the gradual adoption of the new agriculture, the substitution to a great extent of the four-course for the three-course system of cultivation, the spread of turnip and artificial grass culture, and the great increase as a consequence of live stock. The development of English industry and manufactures was remarkable, and was due in great measure to the plenty which prevailed. We shall see presently what bounties did.

When prices occasionally rose to what, till recent years, we should call moderate rates, say 50s. a quarter, there were great discontents and occasionally serious bread riots. The act of Charles does not appear to have been blamed for these disagreeable experiences, for the calamity was generally assigned to the acts of the corn dealers, who were branded with the names of forestallers and regraters, and looked on generally as public enemies. (*See* FORESTALLERS AND REGRATERS.) The government were exceedingly alarmed at these symptoms, and did their best to keep the ports open for foreign food. At last by 13 Geo. III. foreign corn could be imported at nominal duties when wheat was over 48s., rye, beans, and peas 32s., barley, bere, and bigg 24s., and oats 16s., the rate on wheat being 6d. a quarter, on rye, etc. 3d., on barley, etc. and oats 2d., and the whole duty might be drawn back, if re-exported in six months. In 1791 the corn laws were consolidated but not materially changed. During the great continental wars prices were all that the farmers and landowners could desire.

But in 1813, after the retreat from Moscow, the domination of Napoleon came to an end, and with it his anti-commercial decrees. Large quantities of foreign corn came into England and prices fell. In 1815, therefore, another act was passed (55 Geo. III. c. 26). Under this act no foreign corn could be taken out of bond unless when the following prices were reached—wheat 80s., rye, peas, and beans 53s., barley, bere, and bigg 40s., and oats 26s., some favour being shown to the produce of Canada. It was supposed that this enactment would raise prices, but they continued provokingly low, and in consequence there occurred what was called agricultural distress. By 3 Geo. IV. c. 60, a new scale of maxima was adopted of 70s., 46s., 35s., and 25s. Certain modifications were made between this date and 1846, when the corn laws were abolished, the measure to take final effect in 1849. Only a

shilling duty was left, which was abolished twenty years later by Mr. Lowe.

The bounty on exported corn, as is stated above, was granted in 1689. The corn law of Charles II. had been a failure. It did no good in cheap years, it was dangerous in dear times, and had to be suspended. The bounty was far more plausible, and, at first sight, far more defensible. It stimulated corn growing, and to stimulate corn growing was to provide more abundant, perhaps cheaper food. The bounty too seemed so small, especially when compared with the duties on imports under the act of Charles. English agriculture was in a deplorable condition in 1689. It was affirmed by the closest and most intelligent observer of the time, Gregory King, that the average rate of corn production in England was, one kind with the other, not above fourteen bushels to the acre, and the bounty would mend this serious deficiency of enterprise. State-aided industry was a superstition of the time; the grant of the bounty by parliament seems to have excited—and I have read much that was written at the time—neither criticism nor opposition.

The bounty was not to be given when the price of wheat reached 48s., of rye 32s., of barley and malt 24s. a quarter. When the prices were below this amount, the payments on exportation were 5s. on wheat, 3s. 6d. on rye, 2s. 6d. on barley and malt. After the Scottish union oats were included and bere, and 2s. 6d. was to be paid on these, 15s. on oatmeal. By 13 Geo. III. c. 43 the maximum price of wheat was made 44s. and 5s., rye 28s. and 3s., barley, malt, and bere 22s. and 2s. 6d., oats 2s., oatmeal 2s. 6d. But after 1773 it was rarely that prices were low enough to admit a bounty, and very soon the bounty was practically suspended. The form, however, survived during the continental war.

The sliding scale of import duties had no effect on agriculture, and till the last thirty years of its existence only a fitful effect on prices. It did not encourage cultivation, because the best hopes of farmer and landlord seemed to lie in scarcity. Its effect was that it destroyed or weakened the foreign market, by rendering it uncertain, and that it prevented the exchange of British manufactures against foreign grain. It deluded the farmer by the excessive range of variation in prices which it caused, and it was a serious injury, for the same reason, to the mass of the people. Hence there were people who denounced the sliding scale, but thinking that British agriculture could not prosper without some assistance, advocated a fixed duty. This was the policy of the Whigs. The advocates of free trade answered that a fixed duty was a fixed wrong, and this criticism was accepted and endorsed by parliament.

But the operation of the bounty was very different. It cannot be doubted—the writer has, for the first time, collected the evidence—that the bounty stimulated corn-growing, enclosures, and to a very limited extent arable agriculture. But this advantage, such as it was, was countervailed by mischievous consequences. In the first place, it discouraged the spread of the new agriculture, *i.e.* in general terms, the substitution of the four-course for the three-course system, and the abandonment of bare fallows for turnip and artificial grass culture, and with this the increase and improvement of cattle and sheep raising. The legislature encouraged only one branch of agriculture, corn raising, and by implication discouraged the other branches. In the next place, men gambled for the bounty. It was reckoned that in average cheap years, only a thirty-third of the crop won the bounty, but it obviously affected the whole crop which was raised. In just the same way, in modern times, the beet-root crop, favoured by continental governments, is the most unsatisfactory and disappointing industry on the continent.

In the next place, for a long time, as no rule as to quality was established, the bounty was favourable on corn which was below the average quality. The contrast between minimum and maximum prices of grain on the London Corn Exchange is extraordinary, constantly being thirty to forty per cent, for so great an interest was created by the bounty that it has been possible to collect, from the days of the great famine of 1709-10, accurate accounts of weekly London prices from the newspapers. At last the legislature required the city of London to furnish a return of prices and quantities, and established a system of averages. But the most important action which parliament took was in 1770, when returns of corn prices were required from every county weekly, which were published in the *London Gazette*. These returns disclose the fact that, though by this time the effect of the bounty was much diminished, the price of corn in the inland counties, *i.e.* those who had no access or no easy access to the ports, was fully 5s. a quarter higher than it was in the maritime counties or from fifteen to twenty per cent dearer. The whole country paid the tax, and some parts of it had to pay all the more for food. The officials too, who made the returns, were constantly charged with stating that prices were far lower than experience justified.

There was considerable difference of opinion about the operation of the bounty. Arthur Young, who had only the interests of progressive agriculture at heart, believed that it and the sliding scale were important stimulants to agriculture. Smith, as might be expected, though he was not possessed of the facts which prices disclose, denied that the effect was anything but mischievous. Tooke, perhaps the

last considerable economist who handled the question, declares that in the absence of accurate information on the effects of it, he is unable to determine whether the good was greater than the evil. On this, the evidence of facts, of which a summary has been given, is conclusive.

J. T. R.

CORN RENTS. During the latter half of the 16th century rents were very slow to improve. In Stafford's famous pamphlet, at one time ascribed to Shakespeare, the complaints of the landlord are loud. Prices had trebled and rents were stationary. The explanation is, that everything needed for agriculture, except labour, had increased near threefold in price, and the margin from which rent could be paid was therefore not increased. The Oxford and Cambridge colleges, the schools of Winchester and Eton, were greatly impoverished, and apparently found it difficult to live. Their tenants too were all on customary rents.

In this crisis parliament, at the instance of Burleigh or Sir Thomas Smith, for the credit is divided, came to the rescue by the act of 1576, 18 Eliz. c. 6, under which the colleges and the two schools were empowered in the grant of fresh leases to reserve one-third of the old rent in produce or in money at the maximum prices of wheat and malt, in the markets of Oxford, Cambridge, Winchester, and Windsor. I have found that the produce rent, at fictitious prices, had been for some time customary at King's College, Cambridge, before the act was passed; and the hint probably came to Burleigh or Smith from this practice. Thus the college demanded that the lessee should supply so many quarters of wheat and malt at 6s. 8d. and 4s. though the market price might be treble these amounts, and sheep at 2s. when the lowest price was 6s. 8d. The Cambridge colleges clung to this system despite the act till the end of the century. The reason, I believe, was that domestic grinding and baking were customary at Cambridge, while at Oxford purchases were made from the common baker or brewer. The local custom was dropped at last, it appears, because these covenants did not secure high quality.

The act did not prejudice existing leases. Hence it is some time before the returns of corn prices appear. The earliest which I have found in Oxford is in 1582. The practice of Eton long continued to be that of King's College, and Winchester appears to have adopted the change slowly, for the accounts of this school have, it seems, been lost up to the time of the Long Parliament. The rent days at Oxford on which the market returns are given are rarely more than two, New College alone having occasionally a third. At King's College they were thirteen, but one seldom finds the whole. At St. John's they are six, and these are always found. At Winchester there were also six, at Eton seven, though at last Eton only has two. Winchester has occasionally oat rents.

These corn prices are of the greatest value in the history of agricultural prices, which indeed could not, since the Reformation, have easily been constructed without them. In the early part of the 18th century Fleetwood, afterwards bishop of St. Asaph, and previously fellow of Eton, extracted the Eton prices, and published them in his *Chronicon Preciosum*. This gave the hint to parliament, which, during the 18th and 19th centuries, occasionally called on the Eton authorities to return their corn prices. These were published in parliamentary papers. The writer of this article was the first to collect the Oxford, Cambridge, and Winchester prices, as well as those of Eton, from the original records. It is probable that no other country could supply such a series; but from casual and broken notices of French corn prices, it is plain that generally they are not very different in amount, money and measures being duly interpreted, from those which prevailed in Southern England. J. T. R.

CORN RETURNS. By the Corn Returns Act 1882 (45 & 46 Vict. c. 37) which consolidated and amended the 5 & 6 Vict. c. 14 and the 27 & 28 Vict. c. 87, the buyers of corn in certain towns named by order in council, are required to make to the inspectors of corn returns, weekly returns of the amount of each sort of British corn bought by them, and the weight and the price thereof. Such returns are to be made in not less than 150 and in not more than 200 towns. The inspectors are to forward to the Board of Trade weekly summaries of these returns, and from these summaries the Board of Trade computes the weekly, quarterly, and yearly average prices of each sort of corn. These averages are computed by dividing the total prices by the total quantities. On these averages depends the yearly amount payable to owners of tithe rent charges (see TITHE). J. E. C. M.

CORNAGE. A monetary payment called cornage was a frequent incident of the tenure of land in the counties of Cumberland, Durham, Northumberland, and Westmoreland. Littleton explains cornage tenure to be the tenure of land by the service of blowing a horn to give notice of the incursions of the Scotch; and this explanation has been often repeated, but is certainly incorrect. The true explanation is that in lands held by cornage tenure the tenant paid to the lord a small sum of money for every horned beast in his possession, or a fixed sum as a composition. The payment was an incident of both free and unfree tenures, and in the latter case was paid by all the tenants together. In the manor of Easington in Durham it was fixed at 30s. a year from a very early period, and in most cases the amount paid bears no

relation to the actual number of cattle on the land. But a charter of Henry I., in granting the cornage of Borton to the monks of Durham, estimates its amount as twopence from each animal. For similar payments in other countries than England see Ducange, *Glossarium, s.v.* In England cornage seems to be confined to the four counties named, where it is also known as "horngeld" or "hornbield." It perhaps points to an early payment of rent in cattle. Servile tenants owing cornage were often also bound to provide the lord with a milch-cow or its value.

[Littleton's *Tenures* 1481. *The Boldon Book*, edited for the Surtees Society by the Rev. William Greenwell (see esp. "Glossary," *s.v.*)] C. G. C.

CORNER ON STOCK EXCHANGE. A speculator is said to have got into a corner when he cannot deliver the securities or other articles which he has sold for delivery at a given date (*v.* BACKWARDATION and BEAR). A. E.

The word is an Americanism now acclimatised here, signifying a condition of a market in which speculators of one class are placed at the mercy of their opponents. It is a term even more extensively used in the produce markets, in the corn trade, and so forth, than upon the stock exchange. As a rule, the speculators "cornered" are those who have sold what they did not possess in the expectation of being able to buy upon lower terms. In many cases such sales have extended to a larger amount than there are goods of the class, or securities, upon the market or in existence, and if the buyers are strong enough to demand a delivery of what has been sold it is evident that the sellers must at last apply to those to whom they have sold to let them off their bargains. The result is that the buyers may then demand their own terms to cancel the transaction. In America, where gambling in produce is carried to enormous lengths, these "corners" are frequent. A "corner" may be said to differ from a "rig" in that the latter more often is applied to a transaction such as the famous French operation in copper. In that case an effort was made to secure the entire production of the world, amounting to upwards of 200,000 tons annually, and to sell it only at an advance of about 100 per cent, all consumers of copper being compelled to purchase from the syndicate. The result proved disastrous. The French *Société des Métaux* "rigged" the market for upwards of a year, but it may also be said that they "cornered" those who had speculatively sold copper for forward delivery in October 1887, the price advancing from under £40 per ton early in that month up to nearly £90 in January 1888 (*see* CARTEL; COMBINATION).

CORNIANI, GIAMBATTISTA (1742-1813) born at Orgi Nuovi, in the province of Brescia, wrote *Riflessione sulle Monete*, in 1796 (published in Verona for the first time, and republished in 1804 by Custodi) on the general effects depending on the quantity of coin which circulates in a country, and two other essays, entitled *Discorsi due della Legislazione relativamente all' Agricoltura*, read in 1777 before the academy of Brescia on rural legislation, and also published by Custodi, whose personal friend he was. Corniani, although an indifferent economist, was a distinguished man of letters. M. P.

CORPORATION, MUNICIPAL. A body of persons incorporated for the purpose of promoting the good government of a town.

By the Municipal Corporation Act 1835 (5 & 6 Will. IV. c. 76) the greater number of municipal corporations were reformed and their constitution placed upon a uniform basis. That act and subsequent acts have been consolidated by the Municipal Corporations Act 1882 (45 & 46 Vict. c. 50).

The government of a municipal corporation is entrusted to a mayor and a certain number of aldermen and councillors who constitute the "council." The council is elected by the burgesses; the aldermen and mayor by the council. The qualification of a burgess consists in (1) being of full age; (2) having occupied a building in the borough for twelve months; (3) being rated to relief of the poor and having paid his rate; (4) not having received parochial relief; and (5) residing within seven miles of the borough.

The rents, profits, and interest of all corporate property is paid into a borough fund, and out of such fund the expenditure is defrayed. Any deficiency is made up by a borough rate.

The consent of the Treasury is required to enable a corporation to acquire or dispose of land, but it may, subject to certain restrictions, make leases not exceeding thirty-one years.

The chief powers enjoyed by municipal corporations are: the administration of all town property and trading undertakings; paving, lighting, and the cleansing and maintenance of thoroughfares; the making of sewers; the establishment of public buildings; appointment and supervision of the police; and the superintendence of elementary education where the population exceeds 10,000.

Special powers are enjoyed for the purpose of removing unhealthy areas and erecting workmen's dwellings.

By the Local Government Act 1888 boroughs were divided into four classes: (1) those under 10,000 inhabitants; (2) those over 10,000 but without quarter-sessions; (3) those over 10,000 but with quarter-sessions; and (4) sixty-one named boroughs each with a population of 50,000, on the 1st June 1888.

The first three classes form part of the county in which they are situate. Class 1 is practically incorporated with the county. In class 2 the right of the borough justices to grant licences is withdrawn. In class 3 the

boroughs are permitted to continue to manage minor business. Class 4 is invested with all the powers of a county council. A county borough is entitled to share in the local taxation account; the amount depending on an adjustment to be made between the county and the borough; and all boroughs are to receive from the county council grants in aid of the salaries of certain officers, and of county lunatics.

Any deficiency of income is met by borough or police rates. As a sanitary authority a borough may also levy general district rates and private improvement rates. Money may be borrowed with the assent of the ministry of health.

[C. Gross, *The Gild Merchant*, Oxford, 1890.—J. S. Vine, *English Municipal Institutions*, London, 1879.—C. N. Bazalgette and G. Humphreys, *Local and Municipal Government*, London, 1888.—J. M. Lely, *Municipal Corporations*, London, 1882.] J. E. C. M.

CORPORATION, Aggregate. An association of persons which the law regards as capable of possessing rights, and of being subject to duties. The existence of a corporation depends in English law on one of five things, viz. (1) common law, (2) prescription, (3) statute, (4) charter, or (5) implication (see Grant *On Corporations*); but practically all corporations may be traced to charters granted by the crown or to acts of parliament. The early corporations were generally ecclesiastical or municipal bodies, though some were formed for charitable or educational purposes. Trading corporations are more modern. At first they were, and sometimes are, incorporated by charter (see Charter) or by special act of parliament, but in 1844 persons were allowed to form a company by means of a certificate of incorporation. Each member of a company so incorporated was liable for the debts of the company, but in 1855 an act (18 & 19 Vict. c. 133) was passed which authorised the formation of companies in which the liability of each member is limited to the amount of shares held by him. This principle has been developed by subsequent legislation, and the "company" is to a large extent taking the place of the "partnership." Apart from the limitation of liability, a company possesses a great practical advantage over the partnership, inasmuch as the death of a partner usually dissolves the partnership, whereas the death of a member of a company does not affect its existence. A further important distinction between these two modes of conducting business is that one partner can as a rule withdraw his capital, whereas a shareholder cannot do so unless the company is wound up.

J. E. C. M.

CORPORATION, Sole, is a name under which each successive holder of any public office is described in his capacity of owner of any property attached to such office (*e.g.* the rector of a parish as owner of the glebe). E. S.

CORPORATIONS OF ARTS AND TRADES.

England, p. 428: France, p. 430; Germany, p. 431.

The constitution of manufacturing industry in the Middle Ages was everywhere in Europe characterised by the system of Guilds, or corporations of arts and trades. These differed more or less in the different countries. In England, where the state was consolidated and a strong central power established at an earlier period than in France or Germany, trade was earlier and more completely controlled by the government, and the state regulations relating to it more energetically and systematically carried into effect. The guilds were not as widely diffused in England, nor had they as great a degree of autonomy, as elsewhere. But in their aims and operations, wherever they existed, there was a remarkable general similarity, so that a statement of these for England will apply in a great degree to the other countries which have been named. The same remark may be made respecting the history of these institutions. A survey of their rise, progress, and decline in England, France, and Germany respectively, will show that in their development and downfall identical social causes were everywhere in operation.

England.—Already, in the Anglo-Saxon times, religious and social guilds had existed for the performance of pious offices and for mutual help and solace, and frith-guilds for joint action in personal defence and for preservation of the peace. The latter rose naturally in a society where the state was not strong enough to provide adequately for the legal protection of its members. But the merchant guilds, which are found in the Norman period in many English towns, though they may have been suggested by these earlier associations, had quite different aims. The merchant guild (or "hanse" as it was sometimes called) was a society "formed primarily for the purpose of obtaining and maintaining the privilege of carrying on trade" in a town. This privilege implied the restriction of that trade to the guild brethren, who had also defined rights of traffic with other towns. Any one, not a member of the guild, trading in the town, was subject to fines. An entrance fee had to be paid on admission to the guild, and probably annual dues to the common fund, which were spent in festivities or religious offerings, or in relieving the poorer brethren. Rules for the conduct of buying and selling in the town, and for the enforcement of commercial morality, were framed by the guild, and binding on its members. Admission to the merchant guilds seems to have been open only to those inhabitants of the town who were full burgesses by virtue of holding land within the town boundaries. Each guild had for its head a president called an *alderman*, with two or more assistants

known as *wardens*; and there was a council of twelve or twenty-four.

The earliest distinct mention of a merchant guild is in the year 1093, but they may have existed before the Conquest. The charters granted by Henry II. to a number of the leading English towns recognise the existence in them of guilds merchant. The craft guilds appear somewhat later; they are found in some places early in the 12th century, and in the 13th we hear of them in most of the industrial towns. Their origin has been variously explained. Some have regarded them as the descendants of the *collegia* of the Roman artisans. But the latter organisations, at least under the later empire, were not free associations, but were imposed by the government on the working classes; and it is not likely that they had a continuous existence from the 5th to the 12th century. Others suppose the craft guilds to have arisen out of organisations, under seigniorial regulations, of artisan serfs on the lands of monasteries and great nobles. But this is a mere hypothesis, so far as England is concerned, and for France and Germany it has been made probable only in some special cases. Brentano, again, has put forward the view that the craft guilds were formed in consequence of the expulsion of the petty artisans from the merchant guilds, the craftsmen combining for mutual protection against the old burghers. An obstinate struggle does seem to have taken place in Germany and the Netherlands between a burgher oligarchy which had got possession of the municipal government and the members of the craft guilds; but there is no evidence of any such contest in England. These guilds seem to have everywhere arisen spontaneously out of the social conditions of the Middle Ages, and to have been at first simply private associations for the general advancement of the interests of the artisans, as the merchant guilds had been for promoting those of the traders.

The earliest English craft guilds that came into notice were those of weavers and fullers of woollen cloth. We hear of them in 1130 as making an annual payment to the king for the royal licence, without which they were treated as "adulterine" and fined. The royal charter forbade any one in the town to which it related to follow a craft unless he was a member of the corresponding guild, and conferred on the guild the right of exercising a certain supervision over its members. Of the powers thus bestowed the municipal authorities were often jealous, and we find those of London offering King John a money payment on condition of his abolishing the weavers' guild. The exclusive right to engage in trade which had belonged to the merchant guilds brought these last into collision with the craftsmen, who sometimes sold the wares they produced directly to their customers; and the craftsmen ultimately gained the rights of burgesses, though we cannot trace the history of the change. The monopoly of the burgesses was probably lost before the end of the 13th century; in any case the statute of 1335, establishing the freedom of buying and selling, must have abolished it. This amounted practically to a dissolution of the merchant guilds, which survived only as social and religious clubs, or as a machinery for the discharge of certain functions of the municipal government, especially for admission of apprentices to the freedom of the city. The bye-laws of the several craft-guilds made it a requisite for admission to a trade to have served an apprenticeship of a certain duration, the term being usually seven years. They also prescribed the proper treatment of apprentices by the master, and sometimes limited the number which a master was allowed to have. They fixed the conditions which must be satisfied before setting up as a master, and regulated the processes of manufacture with a view to the production of good and solid work. They exercised a general surveillance over the moral conduct of their members. Violations of the rules were punished by fines, and, in case of repeated offences, by expulsion from the trade. The guilds further performed in some degree the functions of friendly societies, and practised common festivities and religious observances.

These bodies have sometimes been represented as issuing the regulations and exercising the jurisdiction we have described quite independently of the city authorities, whilst others consider them to have been no more than the mechanism through which the municipality superintended manufacture, the officers of the guilds merely bringing offenders before the municipal courts. The truth seems to lie between these two views. The town magistrates *could* issue regulations binding on the crafts; but the guild rules were in fact generally drawn up by the craftsmen themselves and submitted to the magistrates, who usually sanctioned them as of course and, though sometimes taking causes into their own hands, commonly left the supervision of the manufacture and the decision of minor questions to the masters, bailiffs, or overseers of the trades. The extent of the jurisdiction of the guilds was probably different in different places. The kings, from Edward I. onward, favoured the craft guilds as a useful counterpoise to the urban magnates, and as a serviceable auxiliary for police purposes. And the municipal authorities themselves became friendly to them as subserving the latter object. Indeed before the end of the reign of Edward III., citizenship was bound up with the membership of one of the guilds, and it was natural that the jealousy between them and the town governments should disappear.

In the time of Edward III. there were as many as forty distinct companies or crafts in

London, and at the end of the century not fewer than sixty; in towns of the second rank their number increased more slowly. In the first half of the 14th century the guild system was at its maximum of efficiency. It continued to extend itself to new centres for two hundred years afterwards. But under the Tudors the direct control and superintendence of industry was more and more taken into the hands of the central government, and the regulations of crafts and trades were incorporated into the public law of the realm. The act 5 Eliz. c. 4 (1562), commonly called the Statute of Apprentices, adopting what had been the ordinary bye-law of the corporations, required a seven years' apprenticeship in all trades carried on in market towns. It provided that when there were, in certain specified trades, three apprentices in a workshop, at least one journeyman should be employed, and for every additional apprentice another journeyman. It also contained enactments respecting the hours of labour and the annual fixing of the rate of wages by the justices of the peace. This statute was held not to apply to trades established at a later period, or to places which only obtained corporate privileges after 1562; and thus some of the most important manufactures of England were never subject to it. In Scotland no such law existed, and Adam Smith says that "he knew of no country in Europe in which corporation rules were so little oppressive."

The increasing application of great capitals to industry, and the substitution of the factory for the workshop, tended to make the old trade rules obsolete; and the guild spirit became at the same time more narrow and selfish. In the 18th century any statutes which gave coercive power to the guilds, though not formally repealed, were in a great degree allowed to fall into desuetude, and the importance of these institutions practically disappeared. They were discredited in principle by the polemic directed against them in the *Wealth of Nations*. Adam Smith condemned "the exclusive privileges of corporations, statutes of apprenticeship, and all those which restrain in particular employments the competition to a smaller number than would otherwise go into them," as "encroachments on natural liberty," as raising the market prices of the wares produced above their natural price, and as obstructing the free circulation of labour from one employment to another. Smith held that a long, or indeed any fixed, term of apprenticeship was altogether unnecessary; but he certainly exaggerates the facility with which handicrafts can be thoroughly learned. He also thought it a mere pretence that corporations are required for the better government of trade. After several partial enactments of a liberal tendency, the apprentices' act of Elizabeth was repealed in 1814 (54 Geo. III. c. 96), and the trade privileges of the guilds formally abolished in 1835 (5 & 6 Will. IV. c. 76). Partly as a result of the legal destruction of the old system, a new legislation has been introduced for the protection of the working classes by provisions for the healthy conduct of manufacturing production, and the limitation and regulation of the labour of women and children.

France.—In France the name *jurande* was given to the office of those who were appointed to watch over the execution of the trade regulations and the conservation of the interests of the several crafts. These *jurés* corresponded pretty nearly to the English wardens. Those only who were admitted as *maîtres* could carry on a manufacture on their own account. The production of a *chef-d'œuvre* (masterpiece) was commonly required for admission to the *maîtrise*, and it was the business of the *jurés* to pass judgment on its execution. The journeymen (*compagnons*) had been apprentices to the trade, and expected in time to be themselves *maîtres*. The relations of the three classes were substantially the same as in England. Powerful corporations existed from early times in Paris. The Parisian *marchands de l'eau* (*nautæ Parisiaci*) dominated the commerce of Paris. The provost of this body was the head of the municipal magistracy. The corporations of goldsmiths and of money-changers were also very ancient. The documents relating to the trade corporations of the metropolis begin to be numerous in the time of Philip Augustus. The trade statutes and customs of the city of Paris in the 13th century are preserved in the collection made by Étienne Boyleau (see BOILEAU, E.), appointed provost of the city by Louis IX. about 1260. The kings, who at first were hostile to the claims of the corporations, from the beginning of the 15th century favoured them, both as useful instruments of police and as a source of fiscal aids. But they also sought, though often with but little success, to temper their exclusiveness, repress their exactions, and adapt their regulations from time to time to the development of new branches of industry and new methods of production, whilst on the other hand they insisted on their royal right of issuing letters of *maîtrise*, and of supervising the guilds. Louis XI. in 1467 armed the trades, forming them into banners and companies, bound by an oath of fidelity to the crown. An edict of Henry III. (1581) gave to the institution of corporations the extent of a national system, and placed all the trades of the kingdom under a general law. The edict at the same time corrected prevalent abuses. It mentions in particular the heavy expenses to which artisans were subjected in order to obtain the *maîtrise*, the masterpiece which they had to produce sometimes absorbing the work of more than a year, and candidates being expected to regale the *jurés* with banquets and

conciliate them by gifts. The crown, by this act, may be said to have taken possession of the police of manufacturing industry throughout the realm. But, owing to the opposition of the guilds and of the civic authorities, the provisions of the edict were very imperfectly carried into effect, and a law of Henry IV. (1597) was not much more successful.

In the last states-general (1614) the *tiers état* brought forward a strong protest against the prevailing evils, and prayed for the suppression of all guilds created since 1576, and the opening of crafts to all persons without exception, subject only to visitation by state inspectors. But the government did not respond to this appeal. The industrial policy of Colbert recognised the guilds, but only as organs of the state, subject to its control and direction; he revised the statutes of the existing bodies, and founded many new ones, and regulated their whole proceedings (1673-74). But though eminently successful in his own hands, his general system, as carried out by his unintelligent and feeble successors, tended rather to impede than to promote industry. While the guilds were not duly controlled, they were subjected to exorbitant charges, and were thus forced to impose extravagant dues on their members, and to insist more strongly on their monopoly. There were endless prosecutions of individual artisans, and conflicts as to the limits of the several industrial professions, as well as struggles for precedence between them, and these tended to bring the whole system into disrepute. The body of laws relating to them, however, remained essentially unaltered till 1776, when Turgot proposed to Louis XVI. the entire abolition (except in a few trades for special reasons) of the *jurandes* and *maîtrises*, and the establishment of absolute liberty of manufacture. In an elaborate report which, according to his custom, he prefixed to the ordinance, he maintained that "the right to work is the sacred and inalienable property of the poor man," and that "all sound principles were violated by the accepted doctrine that it was a royal right, which the prince might sell and the subjects must buy." The ordinance was carried against the will of the parliament in a *lit de justice*, but its execution was strongly opposed by interested parties, and, after the fall of the minister, the old system was introduced again, though with some liberal reforms. This state of things lasted until the constituent assembly in 1791 abolished the corporations and proclaimed the complete liberty of industry. With some fluctuations this policy has, on the whole, been maintained up to the present time.

Germany.—The German *Zünfte* were in their aims and constitution essentially similar to the English guilds and the French corporations. The Emperor Henry I. had required all artisans to settle in towns, and the handicrafts were long held to be the special right of urban communities. The *Zünfte* are first found in the 12th century in particular cities and towns. They gradually gained influence in the civic administration, and on the other hand strengthened the cities against the nobility. At first purely private associations, they came to be recognised as organs of the state, and exercised certain magisterial functions. In the 13th and 14th centuries they extended to many additional cities, and in the 15th century there was a complete guild organisation of the trades throughout Germany. The rules of the system were rigorously carried out. What was known as the *Zünftzwang* was strictly enforced, that is, the requirement that every artisan should belong to one of the corporations. The boundaries of trades were precisely fixed, so that a member of one could not do work which properly belonged to another, however cognate the occupations might be. The *Zünfte* in different places were bound together and kept in touch with each other through the institution of the *Wanderjahr*.

In the 17th century the decline of these corporations began. The growth of the arts, the rise of new crafts outside the *Zünfte*, and the extension of manufacture on the great scale made it impossible to maintain the old restrictions on processes of production; and the opening of distant markets and the development of speculative production required a new trade *régime*. At the same time the central governments, in the spirit of the mercantile system, assumed more and more the direct control of the whole field of national industry. As the *Zünfte* increasingly failed to serve real public ends, they were more and more governed by a spirit of selfish exclusiveness, and were worked in the interest of a few privileged families. For those who were not sons of masters it became almost impossible to obtain admission except by marriage with the daughter or widow of a master. The reception of apprentices was made difficult by the imposition of conditions and charges, the qualifications required of journeymen (*Gesellen*) were enhanced by lengthening of the wander-period and the time of probation. The education of apprentices was neglected, and there was little care for the condition and treatment of the journeymen. But the *Zünfte* still retained their powers, and it was only late in the 18th century that they were seriously attacked. They had then to sustain the same assaults of economic theory which were directed against the English guilds and the French corporations. Schlettwein, a German follower of the PHYSIOCRATS (*q.v.*), denounced the whole system and demanded freedom of industry. But the legislative overthrow of these institutions belongs to the 19th century, and was not completed in all the states before the middle of its sixth decade. The Stein-Hardenberg legislation of 1808-10 and the law of 1811 established the liberty of

manufacture in Prussia, which had been previously introduced in the provinces which formed part of the confederation of the Rhine. The principle of freedom was embodied in the general ordinance (*Gewerbeordnung*) of 1845, but the revolutionary period which followed prevented the fair trial of this ordinance, and the complaints against it led to a modification of its provisions and a partial return to the old order of things in the ordinances of 1849. In 1861 and 1865 changes were again made in a liberal direction, but the law of 1849 remained substantially in force in Prussia. In most of the other states, between 1860 and 1864, the principle of industrial liberty was introduced. All these local laws were in 1869 merged in the uniform code of the North German Confederation, which has since become that of the empire. By this code the exclusive rights of *Zünfte* or mercantile corporations, the distinction between city and country with respect to manufacture, the necessity of a proof of capacity before entering any craft or trade, the limitation of each artisan to one branch of production, and all restrictions as to modes of production, have been abolished, and it is left open to every subject of the empire to carry on any industrial profession, and to take apprentices and employ journeymen in such numbers as he may find expedient, subject only to sanitary and other police regulations and to such fiscal obligations as may be imposed by the laws.

Adam Smith and other economists have dwelt too exclusively on the evils and abuses of these institutions, and have left out of account the social necessities out of which they arose, and the not inconsiderable advantages which they possessed. There has of late been a feeling in France and Germany that with the abolition of the restrictions enforced by the corporations, there was a real loss of moral and social, as well as of some economic, benefits. In Prussia several efforts have been made to restore them on a free basis; and it is understood that further steps of the same kind are now likely to be taken by the German governments, whose object is thus to establish a sort of police of the industrial world and solve a part of the great problem of the organisation of labour. It seems, however, extremely questionable whether these institutions could be usefully revived; and the good ends which some have hoped to attain through their instrumentality must probably be effected by other means better adapted to existing conditions.

[The best book on guilds merchant is Gross's *Gild Merchant*, 1890.—On English guilds, the student should first read Brentano's *Essay on the History and Development of Gilds*, prefixed to Toulmin Smith's *English Gilds*, 1870. With it may usefully be compared Ochenkowski's *Englands wirthschaftliche Entwickelung im Ausgange des Mittelalters*, 1879, and Cunningham, *Growth of English Industry and Commerce*.—In Ashley's *English Economic History and Theory*, vol. i. 1888, will be found a clear account of the origin and early history of the guilds, founded on a study of the sources. Seligman's *Two Chapters on the Mediæval Guilds of England* (Amer. Econ. Assoc., vol. ii.) may also be recommended. For the French and German guilds, see the article "Gewerbe" by Schönberg in his *Handbuch der politischen Oekonomie*, 3rd ed. 1890. Art. "Maîtrise," *Encyclopédie* of Diderot and D'Alembert.—The early Parisian trade rules may be seen in Étienne Boyleau's *Règlements des Arts et Métiers*, published for the first time by Depping, 1837.] J. K. I.

CORTI, Adolfo. Author of *Elementi della scienza del Commercio*, Pavia, 1829. M. P.

CORVAIA, Baron, a socialist, caused a book to be written by Michele Parma, proposing the foundation of a national bank intended to redeem the lower classes from the oppression of capitalists. This bank was to be connected with a savings bank, and was designed to eliminate usury. The treatise, *La Bancocrazia, o il gran libro sociale, novello sistema finanziario* was published at Milan in 1840, and was translated into German. M. P.

CORVÉE. In the strict sense of the term, *Corvée* is used to signify a tax levied by the state on the labouring classes, and paid by them in a certain number of days of labour, either wholly unremunerated or remunerated at a rate less than the ordinary rate of wages. In particular such a system of taxation has very generally been applied in many countries to the construction and maintenance of roads and bridges, each locality being compelled to defray the cost of such works by contributions of labour from its inhabitants. In England the common law threw upon the occupiers of land in each parish the duty of keeping the roads in repair. It is not easy to say exactly how this duty was originally carried out, but it may fairly be presumed that the statute 2 & 3 Philip and Mary, c. 8, which is the first of the many highway acts, did little more than declare the system in use. Under this act each parish is to appoint surveyors of highways to oversee the repair of the roads in that district. Labour required for this purpose is to be distributed by the inhabitants in the following proportions. Every occupier of land is to send for every ploughland occupied by him a cart with horses and two able men with them, and every housholder, cottager, or labourer, unless he be a yearly hired servant, is to work himself or by a substitute on such days as the surveyors shall appoint for the repairing of the roads. These days under the act of Philip and Mary were to be four in number, but the act 5 Eliz. c. 13 extended the number to six, which were all to be before Midsummer day. Fines for non-attendance on the days fixed were to form a fund for the repair of the roads. The first step towards the abolition of this form of taxa-

tion was taken by the act 15 Charles II. c. 1, the first of the turnpike acts, which applies the system of tolls to the counties of Hertford, Cambridge, and Huntingdon, through which ran the great road to York and the north. Statute labour, as *corvée* was called in England, had already been found inadequate to keep in proper repair many of the great ways of communication, and the bad state of the chief roads was a frequent subject of complaints and petitions to parliament about this time. The system of turnpikes was accordingly extended by degrees to the whole of England, and in many cases its introduction gave rise to great discontent and serious local riots in spite of the fact that the inhabitants were thus set free from statute labour. However, many of the roads in the country, including almost all purely local ones, were not turnpike roads, but remained subject to the provisions of the various highway acts which were enacted from time to time. But even for the repair of these statute labour was beginning to be found insufficient. The act 3 & 4 William and Mary, c. 12 gives to the justices of the peace power to levy a rate in cases where the six days of forced labour should be found to be insufficient, and after various changes had been introduced by subsequent acts, statute labour was finally abolished by the act 5 and 6 William IV. c. 50, which substituted for it the system of highway boards and rates now in existence.

It would not appear that in England this limited application of *corvée* was ever unpopular. In France, however, where the *corvée* originally existed only in certain districts, its extension to the whole of the country, effected by M. Orry, controller-general of finance in 1737, gave rise to much discontent. The burden on the peasant was heavier, and the peasant was less able to bear it, than in England. In 1758 M. de Boullogne, then controller-general, estimates the annual value of the labour so contributed at 1,200,000 livres, probably a modest estimate. Certainly the burden on the peasant was much heavier. Necker estimates the cost to the peasants of the services rendered in Berry alone at 624,000 livres. These consisted not only of the labour of the peasant himself; beyond this he was compelled to bring with him any beasts of draught or burden, and any vehicle, that he possessed. Nor was it only for the repair of the roads that *corvée* was imposed upon him. In De Tocqueville's *Ancien Régime*, p. 444, will be found an account of the various public services carried out by means of *corvée*, and Turgot's *Lettre au Controleur Général sur l'abolition de la corvée pour les transports militaires* gives a vivid picture of the wastefulness and inconvenience involved in that particular application of forced labour.

A good account of the inadequacy of *corvée* as applied to the construction and maintenance of the roads is given in Diderot's *Encyclopédie*, but the most effectual indictment of this tax is to be found in Turgot's *Mémoire au roi sur un projet d'édit tendant à supprimer la corvée*, with the accompanying criticisms of M. de Miromesnil and Turgot's often rather contemptuous replies (see vol. ii. p. 237 of Turgot's collected works). This, with the curious *Procès verbal du lit de justice tenu à Versailles le 12 Mars 1776*, will give a good idea of the arguments used both by Turgot and his opponents on this question.

The abolition of *corvée* by this edict was, however, only temporary. Turgot's successor Calonne at once restored it, and though again abolished in the early days of the Revolution, the reactionary policy of the Directoire once more reinstated it under the name of Prestation by the decree of 4 Thermidor, an x. At the present day the repair of the communal roads of France is carried out under this system. By the laws of the 28th July 1824 and the 21st May 1836 the municipal councils may call upon every male citizen between certain ages to give three days' labour yearly for this purpose, and may exact the same time from every beast of draught or burden and vehicle within the commune. A money payment in lieu of labour may be made at discretion.

For an account of the use of *corvée* in Egypt, see the *Times*, 14th September 1888. The construction of the Suez Canal during its early stages was carried out under a system of forced labour on a very large scale. In most countries, however, taxes of the nature of *corvée* are now disused, unless the Conscription (*q.v.*) is regarded as an exception to this rule.

In mediæval societies payments in labour to individuals, especially in lieu of rent, were common, and in France were termed *corvées personnelles*. The nature of these and their economic bearings will, however, be most fitly treated of under Manor and Feudalism (*q.v.*)

[*Œuvres de Turgot, nouvelle édition*, par MM. Eugène Daire et Hippolyte Dussard, *précédée par une notice sur la vie et les ouvrages de Turgot*, par M. Eugène Daire, 1844.—M. Necker, *De l'administration des Finances de la France*, 1784.—*Collection de comptes rendus Pièces authentiques états et tableaux depuis 1758 jusqu'en 1787 concernant les Finances de France*, 1788.—Diderot et D'Alembert, *Encyclopédie*, 1772.—De Tocqueville, *L'ancien Régime et la Revolution*, 1857.—De Tocqueville, *Histoire Philosophique du règne de Louis XV.*, 1847.—Larousse, *Dictionnaire Universel*, 1866.—*Penny Cyclopœdia*, articles "Turnpike" and "Highway," 1833.—Stephen's *New Commentaries on the Laws of England*, 1886.—Comyns' *Digest of the Laws of England*, 1822.] C. G. C.

CORVETTO, Louis-Emmanuel, Comte de Corvetto (1756-1821), born and died at Genoa, early distinguished himself in law and politics in his native city, and was made a director of

the Bank of St. George there in 1802. Bonaparte created him councillor of state in 1805, and transferred him to Paris, where he helped to draft the *Code de Commerce* and the *Code Pénal*. In 1811 he became inspector-general of state prisons, was retained in the state council by Louis XVIII., made president of the section of finance, and (27th Sept. 1815 to 7th Dec. 1818) minister of finance. The economic interest of his career centres in this last office. Upon Corvetto devolved the problem of freeing the territory by meeting the war indemnity of 700 million francs (£28,000,000), in addition to claims of 1400 million francs (£56,000,000), for requisitions made during the war. Though the latter claims were cut down to 240 millions (£9,600,000), Corvetto was obliged to issue large amounts of stock, and to seek the aid of Messrs. Hope and Baring; but the circumstances under which the loans were floated, and the action of the government in inflating the price of the stock by large purchases, led Wellington to describe the Paris money-market as the scene of such speculation as had not been equalled since the days of Law. Corvetto justified his action on the ground that it was patriotic to pay the state debts as cheaply as possible and to maintain its credit. His conduct has been severely criticised by M. Léon Say, who argues that the intervention of the government in such speculations can have but a momentary effect upon prices, apart from other and pernicious consequences. The intentions of Corvetto were good: his example was dangerous.

[L. Say: *Les interventions du Trésor à la Bourse depuis cent ans.* (Annales de l'École libre des Sciences politiques 1re année 1886, pp. 12-24).—Baron G. de Nervo: *Le comte Corvetto*, Paris, 1869.] H. H.

COSHERY. In the Middle Ages social and political relations in Ireland were regulated by the clan system. There was no private property in land: the clansmen being co-proprietors with the chief. But although the chief was not lord of the land, he had large customary rights over the property of his dependents. One of the most important of these was *coshery*, an old custom which allowed him to take the houses and provisions of his clansmen for the use of himself and his followers. The English invaders of Ireland based upon this right the practice of *coigne and livery*, by which they extorted from the Irish free quarters and provisions for their soldiers. After the Cromwellian settlement many of the dispossessed chiefs lived for years at the expense of their former dependents, and various statutes were passed to prohibit this custom of *coshery*.

R. L.

COST (Comparative and Relative). The doctrine of comparative cost is the basis of the theory of international trade. It is held that the labour and capital of a country naturally flow into those departments of production in which it has the greatest comparative advantage, or in which the comparative cost is least. Thus, at the time of the gold discoveries in Australia, although the absolute real cost (reckoned in days' labour) of producing various articles, was less than in other countries, their cost, compared with gold, was greater, and consequently they were imported in exchange for the gold. The theory rests on the assumption that labour and capital only move with difficulty from one country to another.

[Cairnes's *Principles of Political Economy, newly Expounded.*—Professor Bastable's *Theory of Foreign Trade.*—Cournot's *Théorie des Richesses.*]

Relative cost is a term used in the theory of value. The normal value of freely produced commodities is said to depend upon the relative cost of production, that is, relatively to that of other things, value always expressing a relation of one commodity to others (see Cost of Production). J. S. N.

COST, in the Sense of Price. Cost is sometimes used to signify price, meaning by this money value at the moment. J. S. Mill says (*Principles of Pol. Econ.* bk. iii. ch. iii. § I.), "Adam Smith and Ricardo have called that value of a thing which is proportional to its cost of production its natural value (or its natural price). They meant by this the point about which the value oscillates, and to which it always tends to return—the centre value towards which, as Adam Smith expresses it, the market value of a thing is constantly gravitating; and any deviation from which is but a temporary irregularity, which, the moment it exists, sets forces in motion tending to correct it." The cost of a thing is thus taken to be indicated by its price, in the sense in which a purchaser uses the word as equivalent to the maker's price at the time. "In common speech," as Prof. F. A. Walker says, "the word price brings up the idea of money value." The "cost" may differ greatly from the "price" which a thing may ultimately fetch, as it may from its "value," but when used in the sense indicated above, the expression refers to the price at the moment. The essential distinctions (1) between normal and market value; (2) cost, in the sense of real cost, and expenses are treated elsewhere. See Value; Cost, Comparative and Relative; Cost of Production.

COST BOOK. The book which contains the names of the shareholders and the number of shares held by each, and particulars of all transactions in a partnership formed for working a mine. Mining regulations differ in various parts of the United Kingdom. In Devon and Cornwall a licence is first obtained to try for ores; and if the metal is found, a lease is then granted for a number of years. The mine is

managed by an agent who is appointed by and works under the direction of the shareholders. A shareholder cannot bind the other shareholders by any contract except for necessaries required for the due working of the mine according to the usual custom of the district. The agent has no power to make the shareholders liable for money lent or upon bills of exchange.

[M'Swinney, *On Mines*, 1884.] J. E. C. M.

COST OF COLLECTION OF TAXES. One of the maxims or principles of taxation enunciated by Adam Smith, and which, as Mill observes, "may be said to have become classical," is that "every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible over and above what it brings to the public treasury of the state" (*Wealth of Nations*, bk. v. ch. ii. pt. ii.) Smith cites four ways in which a tax may offend against this principle. The cost of collection may be excessive; the regulations and procedure which a tax necessitates may be such as to obstruct, and even to divert, industry; it may, by holding out inducements to evasion, require the levy of penalties and forfeitures; and, finally, it may cause annoyance and vexation to the taxpayer from which he would gladly pay to be free. Fawcett adds a fifth ground of complaint, viz. that the price to the consumer of a taxed commodity may be unduly enhanced.

The scheme of taxation existing in the United Kingdom has not hitherto been generally open to objection on any of the grounds mentioned by Smith. Its revenue has been collected at a low cost, amounting to little more than 2½ per cent of the amount collected.

Dowell (*History of Taxation and Taxes*, 2nd ed., vol. ii. p. 529) describes the causes which brought about this result. "The reform of the tariff, diminished smuggling, and the consequent reduction in the customs establishment and abolition of the preventive coast guard; an equalised spirit duty throughout the kingdom and diminished illicit distillation; the consolidation of the numerous revenue boards and establishments; the abolition of the taxes on manufactures; increased facilities of communication by railroad, letter post, and telegraph; the abolition of the pernicious system of appointments to offices through parliamentary influence; and improved education, . . . reduced the percentage by half in the sixty years."

The system of taxation of the United Kingdom has been greatly altered by the Finance Act of 1910, the following taxes having been introduced or increased;—the duties on increment value and site value of land, on undeveloped land, mineral rights duty, provisions as to total and site value of land, provisions for periodical valuation of undeveloped land, duty on site value, duties on excise liquor licenses, valuation of licensed premises, further rates of estate duty and settlement estate duty, with power to transfer land in satisfaction of estate duty, settlement estate duty, or succession duty, super-tax on incomes over £5000. Special provisions as to assessment of super-tax, increase in some instances of the stamp duty on leases and on marketable securities, and additional customs and excise duties on spirits. The Budget of 1914 proposed several alterations in the income tax, and the imposing the super-tax on incomes over £3000. These alterations have caused an increase in the cost of collecting the Inland Revenue. In reading the figures in the table given below (p. 436) we must bear in mind that in 1909-10 the excise formerly included with the inland revenue was transferred to the customs.

The effect, on the cost of collection, of the limitation of the indirect taxes to a small number of commodities, aided doubtless by greatly reformed administration, is very marked. In 1775, when "heavy duties were already imposed upon many of the most important articles of consumption," and "almost all our most important manufactures were taxed," the net revenue of the customs amounted to two millions and a half, levied at an expense of more than 10 per cent in salaries and other incidents, and more than 20 or 30 per cent if the perquisites then exacted by custom-house officers are included (*Wealth of Nations*, bk. v. ch. ii. art. iv.) In 1816, "with everything taxed that could be taxed," the net amount received from customs duties cost more than 14½ per cent to collect. In 1825 this rate had fallen to less than 8 per cent, in 1843 it was 5½ per cent, and in 1909 a little over 3 per cent.

The earlier economists concluded, from the facts of which they were cognisant, that the cost of collecting taxes on commodities was much in excess of that of collecting direct taxes. The operation of the various causes above enumerated has, however, tended to equalise that cost, and the same tendency is observable in other countries. Thus in 1841 the cost of collecting the customs duties was 5·33 per cent, and in the case of excise 6·37 per cent as compared with 2·16 per cent for stamps, and 4·13 per cent for assessed taxes (Bohn, *Cyclopædia of Political Knowledge*, 1849, art. "Taxation"). In 1909 the cost of the customs had been reduced to 3·12 per cent, and that of the inland revenue (excise, stamps, and taxes) was 2·61 per cent. The cost of collecting direct taxes in France before the Revolution was (Roscher, *Finanzwissenschaft*, bk. iii. § 91) 6 per cent as against 14 per cent in the case of indirect taxes, but in 1881 the duties on commodities cost only 5·13 per cent to collect, and the direct taxes 3·5 per cent. In Prussia the cost of the direct taxes rose from 4 per cent in 1861 to 7 per cent in 1883-84, that of indirect imposts fell during the same period from 12 to 9 per cent.

In the United Kingdom it may be said that

the chancellor of the exchequer need not now concern himself with any considerations as to the direct cost of collection when increasing or diminishing the burden of taxation, so long as he is content to alter and adapt existing taxes and not to impose new ones. The expense of collecting the considerable additions made to the stamp duties previous to 1890 probably did not cause an extra expenditure on the part of the state of so much as 1 per cent on the amount received.

The customs and excise duties in 1892 cost the state something over 4 per cent to collect, as compared with 3·5 per cent for taxes and 1·3 per cent for stamps. The proportions probably remain much the same. In the latter case it is to be observed that much of the business performed in connection with their collection is met by the individual taxpayer, who is frequently compelled to employ solicitors and agents for the preparation of the accounts required in connection with the death duties, and to enlist similar services in making payment of many of the stamp duties on deeds. In the case of the stamp duties levied in connection with stock exchange and other commercial transactions, expense and labour devolve upon bankers, brokers, and others, the cost of which cannot be precisely estimated, but which in the aggregate must be considerable. The cost of the collection of the income-tax is comparatively low by reason of the great ease with which much of the revenue under that head is obtained. The deduction of the tax from dividends payable out of the public funds and other similar incomes is a simple matter, and it may be taken that one-third of the tax costs less than 2½ per cent to collect, which would bring up the cost of the remaining two-thirds of the tax to about the same point as in the case of the indirect taxes, viz. 4 per cent.

The small stamp duties on such documents as receipts and cheques are collected at an exceptionally low cost, whether the charges defrayed by the state or by the individual taxpayer be taken into consideration.

It remains to consider the ground of objection under this head against taxes on commodities, viz. that a dealer makes an additional profit by reason of their existence. Fawcett was of opinion (*Manual of Political Economy*, 5th ed., p. 554) that the retailer is able to obtain "the ordinary trade profit" on the amount of the duty, and assuming this profit to be 20 per cent, he estimated that the consumer would pay at least this amount more than the revenue would receive. This, he says, "is the most serious objection which can be urged against taxes on commodities." It may, however, be doubted whether this proposition is clearly established, the fact that the price of an article is augmented by the imposition of a tax will not of itself be sufficient to enable the trader to secure the same rate of profit on the enhanced price as that which he would obtain on the price of the article calculated duty free, as for many commercial purposes it usually is. It is probable that the only circumstances connected with the existence of a tax on commodities which will affect the amount of a trader's profit are either that the tax is collected, and its evasion prevented, in such a manner as to increase the labour and skill necessary to prepare the commodity for sale, or else that the tax is so arranged as to render the employment of additional capital requisite. In so far as the taxation of commodities in the United Kingdom is concerned, the direct cost attending their collection, whether paid by the state or by the trader, has been very low, and, as has been shown above, it does not differ materially from that of other taxes. The necessity for the employment of additional capital in consequence of the manufacturer or dealer being required to pay over the duty prior to the delivery of the commodity for consumption, has been very much reduced by the establishment of bonded warehouses, in which articles can be stored without payment of duty until the time approaches when they are to be taken into consumption.

"The English customs system is remarkable for its vigorous adherence to the principle of purely financial duties." See Prof. Bastable, *Public Finance*, 1903, bk. iv. ch. vii. § 3.

The following table shows the actual gross receipt of duty by the inland revenue department, and the percentage of the cost of collection in the years specified:—

Year.	Total Gross Receipt by Inland Revenue Department.	Net Charges of Collection.	Percentage of Charges of Collection to Gross Receipt.
	£	£	
1847	32,812,000	1,451,000	4·42
1850	33,363,000	1,358,000	4·07
1860	44,141,000	1,608,000	3·64
1870	40,588,000	1,610,000	3·97
1880	49,817,000	1,831,000	3·67
1890–91	58,780,000	1,875,000	3·19
1900–01	90,467,000	2,177,000	2·40
1908–09	98,979,000	2,588,000	2·60
1909–10	47,494,000	1,644,000	3·46
1910–11	107,570,000	2,128,000	1·98
1911–12	86,631,000	2,044,000	2·35
1912–13	87,703,245	2,230,000	2·54

The following table is extracted from the reports of the commissioners of customs for the purpose of illustrating the decline which has taken place in the cost of the collection of the duties under their control. It is, however, clear from the observations contained in the 29th report of the commissioners (1885), that the system of calculation adopted was unduly favourable, and it has since been abandoned. The real cost is probably about 1 per cent in excess of that shown in the table.

Year.	Gross Receipt.	Percentage of Cost of Collection.
	£	
1847	21,824,000	5·97
1850	22,194,000	5·78
1860	23,517,000	3·27
1870	22,575,000	3·55
1874	22,867,000	3·47
1875*	22,042,849	4·36
1880	21,884,105	4·44
1890	22,670,425	3·95
1900	28,151,410	3·13
1909	33,263,703	3·12

* The cost of the collection of the excise and customs duties has ceased to be published since the alteration referred to above was made in 1909-1910. T. H. E.

COST OF LABOUR. See COST OF PRODUCTION.

COST OF PRODUCTION. The *real* cost of production of any commodity is held to be the "sum of the efforts and abstinences" requisite to make it ready for consumption, and the act of production is not said to be completed until the commodity is in the hands of the consumer or until (as Mill phrases it) it has received the utility of being in the place where it is wanted. In a modern industrial society, with a complex system of division of labour and with raw material and other requisites of production drawn from all parts of the world, it is clear that in most cases the series of efforts of all kinds, taking into consideration those which are indirect as well as those which are direct, would be practically infinite. This difficulty, however, may be overcome as in other sciences by neglecting quantities below a certain magnitude. But even after the mental elements in real cost have been reduced to a minimum in number in this way, it is found that the analysis cannot for most purposes, practical or scientific, be carried so far, and we must attempt to arrive at some common measure by which the summation may be effected and a comparison made. This leads to the position emphasised by Mill (bk. iii. ch. iv. § 1), "If we consider as the producer the capitalist who makes the advances, the word labour may be replaced by the word wages; what the produce costs to him is the wages which he has had to pay." After making allowance for the partial error concerning wages implied in the word "advances" (see WAGES; WAGES FUND), we arrive at the distinction which is expressed by the phrase "*expenses of production*" (adopted by Prof. Marshall in his *Economics of Industry*) as contrasted with the *real cost* in the sense defined above. That is to say, we are to consider only the money measures of these various efforts of labour, and it is left to the theory of wages and profits to explain how the nominal or money expenses tend to become proportioned to the real cost. We assume then that in any industrial society there is at any time a certain general rate of wages which is necessary that labour may be forthcoming and a certain general rate of profits which is necessary for the creation and application of the requisite auxiliary and sustaining capital. The forces, whether "natural" or due to the "policy of Europe," to adopt Adam Smith's language, which are the efficient causes of variations in these rates, or which account for the actual rates at any time, are estimated in considering the distribution of the wealth of the society, and it only leads to confusion in considering cost as affecting value to repeat the analysis at the later stage. It may then be taken for granted that in any modern industrial society no article will continue to be produced which does not yield the wages and profits which will satisfy the labourers and capitalists concerned. It must be added, however, as is shown also in the theory of wages and profits, that there are various natural and artificial causes of difference in the returns in different employments even in "the same neighbourhood" (Adam Smith), and with what would now be termed perfect mobility of labour and capital. These causes of difference must be allowed for in addition to the general rates, and we may then assume that in any industrial society there are at any time determinate rates of wages and profits requisite to bring into play particular kinds of labour and capital.

At this point the fundamental law of cost (or rather expenses) of production may be thus stated:—*The normal selling price of any article tends to be such as to yield the wages, interest, and profits involved in the expenses of production.* If the price is above this rate, labour and capital are attracted to the industry, the supply is increased, and the price falls; whilst conversely, if the remuneration is not so high, labour and capital are repelled and the price rises. But it must be observed that in any established industry, owing to the want of perfect mobility of labour and capital, the effect of a fall in price due to a lessened demand for the product on the part of other industrial groups may be to cause a quasi-permanent fall in the rates of wages and profits in that industry; and thus lower for a considerable time the expenses of production (see WAGES). If, however, we assume that mobility is perfect, or allow time for the full effect of the forces which determine wages and profits, the normal expenses of production are given in the law as stated. The argument involved in this analysis will be found to coincide with the ideas implied in the popular usage of the phrase "cost of production." This is best seen from considering a new industry. The maker of a new article will expect to obtain from the selling price a sufficient return to

attract the labour which he requires, and to give besides a fair amount of profit. Otherwise he will not continue to make the article, whilst conversely, if the price is higher than this normal rate, the industry will rapidly spread until through competition the price falls.

We may now carry the analysis a step further and consider the causes of variation in the "cost price" of articles, to adopt a useful popular phrase. It must be assumed once for all that price will vary exactly with or exactly measure value, in other words that the causes of purely monetary variations may be neglected. It would be as absurd to repeat at this stage the theory of MONEY and PRICES (*q.v.*), as at an earlier stage to bring in the theory of wages and profits. To make the assumption quite clear, let it be supposed then that so far as the causes affecting the general level of prices are concerned, there would be no variation in the prices of particular articles.

With this hypothesis it will be seen that a rise in the general rate of wages, reckoned in money, will so far raise the normal price of the articles on which the labour is employed. It is not necessary here to inquire in detail how such a rise might take place; it might be at the expense of profits, or be caused by a lessened amount of unproductive consumption on the part of governments, municipalities, or individuals, or it might be due to increased cost of living caused by natural or artificial causes. It is sufficient to assume that a general rise occurs as described. There is in this case no necessity *a priori* for a corresponding rise in the rate of profit, and in fact that rate may decline. It follows, then, that so far the cost price of things made by the direct employment of labour will tend to rise relatively to those in the production of which there is much fixed capital and a longer time involved. Thus a general rise in wages may disturb relative prices, considered as dependent on cost of production. Similarly a rise in general profits would disturb relative prices, acting of course in an opposite direction. Conversely a fall in general wages or profits would also disturb prices *mutatis mutandis*.

It may next be noted that any change in the quantity of labour or capital employed will so far affect relative prices, as is best illustrated by the effects of the adoption of labour-saving machinery. Ricardo (and to some extent Mill) appears to lay too much stress on the quantity of labour, and in this way to fall into the paradox, true only under extreme hypothetical conditions, that movements in the general rate of wages cannot affect relative values.

Variations in the relative rates of wages and profits requisite for the normal support of any industry, naturally cause corresponding differences in the normal cost price. This is too obvious to require amplification.

Besides labour and capital in the ordinary sense of the terms, raw material is required. This raw material, however, is itself the product of labour and capital, and so far would come under the analysis just given. But since Ricardo gave such prominence to the economic theory of rent, the text-books have emphasised the fact that raw material is more directly dependent upon natural sources of supply, and that these sources of supply may be exploited at unequal costs. This leads to the position that when there is a difference in the cost of producing the various parts of the normal supply, the normal price must be such as to give a fair return to that portion produced under most unfavourable circumstances. If it falls below, the supply from that source would be discontinued until the price rises, whilst if the price is above this limit resort will be made to inferior sources until the "source on the margin" again just determines the normal cost. If, however, the worst land or mine (or the like) just pays the expenses of working at the price, the better sources will give more than the ordinary return. This difference constitutes *economic rent* (see RENT). According to this view it is obvious that economic rent cannot enter into the cost of production, in other words, *price determines rent not rent price.*

Although economic rent, under the simple hypothetical conditions laid down in the theory, does not enter into cost price, the payment of rent under actual conditions may affect this price in several ways. The object of the landowner is to obtain a maximum net return when the land is let, and it is possible that under a system of cultivating ownership more labour and capital would be devoted to land than it would pay the landowner to sanction in the case of a tenant. Many great improvements, for example, have been effected by English landowners with a very small return, and the consequent increase in the supply must have affected the price, whilst a farmer farming for profit and paying rent would have invested much less in the land. Peasant proprietors, again, notoriously cultivate their land beyond the point at which it would yield a rent, and the produce is consequently somewhat cheaper. On the other hand, the kind of produce may be determined partly by the convenience of the landlord (*e.g.* large grazing farms or deer forests as against arable or crofts), and the consequent effect on the supply operates on the price. If we consider the case of a new kind of produce introduced into a fully cultivated country, the grower would naturally consider the rent which he must pay for the necessary land as part of the cost of production. In some cases also there is in rent an element of monopoly, and in all cases it is difficult to separate purely economic rent from profit rent. This point has been pushed to an extreme by M. Leroy-Beaulieu in

his *Répartition des Richesses*, which is much criticised by Prof. Walker in his work *Land and its Rent*. On the whole it may be said that economic rent, if it can be actually separated from the other elements in cost according to the hypothesis assumed, does not enter into cost, but that practically other factors are closely combined with it to form rent in the popular acceptation of the term, and that, in this sense, rent often does form part of the cost (compare Prof. Marshall's *Economics of Industry*).

To complete the enumeration of the elements in cost of production, reference must be made to the effect of taxes (see TAXATION) and to the manner in which cost operates when combined with a complete or partial monopoly (see MONOPOLY).

The doctrine of comparative cost as determining the course of international trade and the limits of international values, originally enounced by Ricardo, and developed by J. S. Mill, Cairnes, and recently by Prof. Bastable, is properly treated under the headings named (see DIFFICULTY OF ATTAINMENT; INTERNATIONAL TRADE; VALUE). It may simply be noted here that in the statement of the theory cost is taken in the sense of real cost, as, owing to the absence of mobility of labour and capital between different countries, there is not the same correspondence between real cost and expenses as may be assumed in the same industrial area.

The most recent criticism of the generally accepted theory of cost of production described above, as embracing wages and profits, is the attempt of Prof. Walker to place profits on the same footing as economic rent, and thus to exclude it from cost of production in the same way as rent is excluded (see PROFIT).

[Cost of production forms such an important part of the general theory of *Economics*, that it is fully treated in all systematic works, and it is not necessary to refer to monographs on the question.] J. S. N.

COST, RELATIVE. See COST, COMPARATIVE.

COTTIERS. Under the Stuarts the clan system of joint occupation of land, based upon the customs of gavelkind and tanistry, was abolished in Ireland. In its place was introduced the English system of private ownership by landlords. The landlords let their lands to tenants at a rack-rent. But these tenants were not capitalist farmers, as in England, but labourers who cultivated a small holding by their own labour and that of their families. This system of peasant-tenants, or cottiers, has been extremely disastrous in its results. Owing to excessive competition for land—resulting from the absence of alternative occupations—the tenants were in the habit of offering more rent than they could possibly pay, and thus scraped a miserable existence from the soil, while owing ever-increasing arrears to the landlord. In the early part of the 18th century Swift records that "it is the usual practice of the Irish tenant rather than want land to offer more for a farm than he knoweth he can ever be able to pay: and in that case he groweth desperate and payeth nothing at all." The inevitable result of the cottier tenure under these conditions—aggravated by absenteeism and the consequent presence of middlemen—was a distressed peasantry and a wretched system of agriculture. The Irish land acts of 1870 and 1881 aimed at bringing about the abolition of these evils.

[Lecky, *History of England in the Eighteenth Century*, vol. i. p. 240 *seq.*—J. S. Mill, *Political Economy*, bk. ii.—J. E. Cairnes, *Political Essays; Fragments on Ireland*, essay iv.] R. L.

COTTON FAMINE (1861-65). Some of the most serious economic disturbances of modern times arose out of the great civil war in the United States, occurring between 1861 and 1865. Amongst these, the most prominent, so far as its influence upon the interests of the United Kingdom is concerned, was the almost complete extinction for four years of the chief source of supply of cotton, the raw material of the largest textile industry of this country. In the month of July 1861 the United States government established a blockade of the southern ports, and, from that time the American cotton field was practically closed for four years. Fortunately the crop of 1860-61, the largest ever grown up to that time, had already been shipped, and stocks in the consuming countries had been abundantly replenished. The existence of these stocks, and the doubts, then widely entertained, of a long continuance of the war, kept prices of cotton comparatively low until nearly the end of 1861. With the opening of 1862, however, a period of scarcity and abnormally high prices began, which has been fitly named the "cotton famine." The immediate and most striking commercial results of the famine were the gradual establishment of new and extended sources of cotton supply, and the diminished use of cotton fabrics, accompanied by an enlarged consumption of woollen and linen goods. At the same time an industrial disturbance was occasioned in Lancashire, Cheshire, Derbyshire, and in the neighbourhood of Glasgow, which stands out very prominently in the history of those years. An excellent and very full record of the painful consequences of the famine upon the manufacturing population, and of the measures taken to mitigate them, is given in Dr. Watt's *Facts of the Cotton Famine*. Its direct commercial effects upon the cotton trade are stated in a paper read before the Manchester Statistical Society in April 1869, by Mr. Elijah Helm, and entitled "A Review of the Cotton

Trade of the United Kingdom during the Seven Years 1862-68."

When the civil war began the English cotton industry had for more than a year been in the enjoyment of unusual prosperity. Prices of the raw material were lower than they had been since 1856, and to this advantage was added a good general demand, home and foreign, for cotton manufactures. The workpeople had been well employed at very high wages, and the profits of spinners and manufacturers had put them into a comparatively strong position. Those engaged in the industry were, therefore, well prepared, for a time at least, to battle with the difficulties which were in store. This fact, together with the prevailing opinion that the war could not last long, explains to some extent the courage with which the threatened disaster was at first faced, and the refusal of external aid which was offered very early. Towards the close of 1861, however, the advancing price of cotton, and the absence of a corresponding rise in the markets for cotton goods, which had previously been supplied very freely, if not too abundantly, began to tell upon the activity of the industry, and as winter approached it was found that the number of people applying for relief to the guardians of the poor in Lancashire was steadily increasing. It was then realised that the cotton manufacturing districts had to face a public danger of great magnitude, which would require much endurance, co-operation, and effort, if it was to be successfully averted. The rapidly increasing number of applicants for pauper relief told a story the significance of which the employers were well able to interpret. It meant that the various reservoirs into which the savings of their workpeople had percolated were beginning to run dry. The funds of the savings banks, the co-operative and friendly societies, and the trade unions had been heavily drawn upon, and their subscriptions had rapidly fallen off. Private and public appeals for help multiplied, and at length relief committees were established in nearly every cotton manufacturing town or village. These formed the machinery of distribution, by means of which an untold amount of local and national assistance was brought home to thousands of workpeople who were thrown out of employment. Suggestions were often made during the winter of 1861-62 that an appeal for national assistance should be made, but they were at first discouraged from a feeling of self-respect; but in the spring of 1862 a fund for relieving distress in the manufacturing districts was started at the London Mansion House, which before its close reached the sum of £528,336. This fund together with other contributions was dispensed through the instrumentality of the central committee in Manchester, the president of which was the then Earl of Derby; the active, energising, and organising instrument being the late Sir James Kay-Shuttleworth, who occupied the position of vice-president. But besides the national, colonial, and other contributions which were forwarded through the Mansion House, large local gifts in money and in other forms were made, and the spinners and manufacturers and other local employers freely gave their labour (besides contributing abundantly in the shape of money) in the work of distributing help to their poorer neighbours by means of "relief tickets," and of clothing and household supplies, of which large quantities were liberally forwarded from many parts of the country. Towards the close of 1862 Mr Cobden, who was a member of the Manchester committee, taking a very serious view of the crisis, advocated an appeal for extended help. He accepted an estimate of the loss of wages occasioned by the want of cotton at more than £7,000,000 per annum, which he said meant a loss to Lancashire of about £10,000,000. He added that from facts which had come within his own knowledge he had arrived at the conclusion that the whole mass of the working population had been brought down "to one sad level of destitution." He urged, therefore, in view of the fact that the shopkeeping portion of the community was fast sinking into poverty, that an earnest appeal should be made for more liberal contributions. This appeal did much to increase the funds at the disposal of the committee. As time went on the sufferings both of the workpeople and their employers greatly increased. Poor rates and other assessments became heavier, and the burden of the famine fell upon all classes. The distress was extreme and widespread. Emigration had been often suggested, and in April 1863 an "Emigrants' Aid Society" was formed. By means of its funds more than 1000 persons were sent to new lands. In that year the number of emigrant spinners was 2086, whilst in 1861 it was only 123. Many more left their homes in the cotton manufacturing districts, whose occupations were not specified. On the whole, however, the prominent fact of the cotton famine, so far as the working population is concerned, is that it was kept at home. The opportunity was used by local authorities to employ by means of borrowed funds the disemployed population in the paving and sewering of streets, and in other improvements, the advantage of which is now observable in the generally clean and sanitary condition of the streets in most Lancashire towns and villages. The impetus given to the linen industry by the cotton famine may be inferred from the fact that whilst there were, in 1858, only 91,646 acres under flax in Ireland, the area had increased in 1864 to 301,942 acres.

The following figures, taken from the transactions of the Manchester Statistical Society

(1868-69), show the average yearly exports of cotton, linen, and woollen piece goods during the seven years preceding the cotton famine, and the seven years which include that occurrence, and during which the three trades were influenced by it:—

Exports of Cotton Piece Goods.

	Yards.
1855-61	2,311,234,538
1862-68	2,219,011,153
Decrease	92,223,385
	or 3·9 per cent.

Exports of Linen Piece Goods.

	Yards.
1855-61	131,238,504
1862-68	210,304,491
Increase	79,065,987
	or 60·2 per cent.

Woollen Piece Goods.

	Yards.
1855-61	168,747,893
1862-68	245,091,834
Increase	76,343,941
	or 45·2 per cent.

[Arnold's *History of the Cotton Famine.*]

E. H.

COTTON LISTS. In the cotton industry the wages of spinners and weavers are regulated by rates or "prices" framed by committees representing associations of employers and employed. A certain rate of wages is taken as a standard, and the object of the list is to adjust wages to the very varying conditions under which the trade is carried on. In the spinning lists wages depend on (1) the amount of yarn spun; (2) the size of the spinning mule; (3) the fineness of the yarn; and (4) the twist in the thread. Any advantage arising from improved machinery is divided between the employer and the employed, and any extra work not coming within the normal duties of the spinner is paid for separately. In the weaving list the elements taken into account are (1) the fineness of the yarn; (2) the closeness of the threads; (3) the width of the cloth; and (4) the length of the cloth. Neither in the spinning nor in the weaving list is the price of the raw material or the price of the finished product taken into account. Adjustments take place from time to time by adding or subtracting a certain percentage from the standard rate.

[See *Reports on the Regulation of Wages in the Cotton Industry*: (1) Spinning; (2) Weaving, published by the British Association for the Advancement of Science, 1887.] J. E. C. M.

COTTON, Sir Robert Bruce (1570-1631); the founder of the celebrated library; was not a mere antiquary, but one who applied the lessons of the past to practical problems. Such is the character of his speech at the council table, "Touching the Alteration of the Coyne." By numerous precedents, Cotton shows the danger of tampering with the purity of coin. The parity to be maintained between the valuation of gold and silver, that the mintage may be reduced to some proportion of neighbour parts, is also inculcated. Among the "divers choice pieces of that renowned antiquary" which have been preserved, may be noticed here—*The Manner and Meanes how the Kings of England have Supported their Estate*, in Cottoni Posthuma, 1651.

[M'Culloch, *Collection of Tracts on Money.*—Jevons, *Investigations in Currency and Finance*, p. 347.—Edwards's *Lives of the Founders of the British Museum.*] F. Y. E.

COULISSE. The name given to the unofficial market on the Paris bourse and supposed to have its origin in the word *coulisse* or sliding bar which formed a passage for the *agents de change*, outside which speculators used to congregate to transact business. This irregular market in time organised itself in a separate building until the licensed brokers (see Change, Agents de) in 1859 instituted proceedings to defend their monopoly, and a number of offenders were condemned to heavy penalties. The coulisse, however, although disorganised could not be suppressed, and the *agents de change* eventually submitted to tolerate it as a lesser evil than an increase in the number of their own offices, with which they were menaced. It now forms two groups, each with its own directing committee which decides on the admission of members and draws up a daily price list of the business done. One group deals exclusively in French *rentes*, but three per cents only; the other in stocks and shares, principally foreign, the number of which is limited by tacit agreement with the syndical chamber of *agents de change*, French banks and railways being among those excluded. The coulisse does not buy or sell for money; it has only one account day monthly, and its rates of brokerage are lower than those of the licensed brokers. Most of the speculative transactions with London and the continental *bourses*, are executed in the coulisse, and for convenience prices of certain foreign government stocks are quoted in fractions instead of in decimals as on the official market. Its members have no common fund as a guarantee towards the public, and contracts with them cannot be enforced by law excepting for stocks and shares not dealt in on the official market, and consequently not comprised in the monopoly of the *agents de change*. The number of *coulissiers* syndicated is nearly two hundred, but in addition a certain number not "on the sheet," as it is called, are recognised. They are not bound by the strict rules of the *agents de change*, who

are forbidden to operate on their own account. Business in the coulisse commences half an hour earlier than in the *parquet* or regular market, and governs in a great measure the opening prices on the latter. The coulisse for *rentes* meets in the *bourse* itself near the railed enclosure called the *corbeille* reserved for the *agents de change*; the other is dispersed in groups inside or around the building, but always in the same places. The *agents de change* recently adopted measures to defend their monopoly, and, May 1892, reduced the number of foreign funds, dealings in which by the *coulisse* were tolerated, and interdicted quotations of prices on the *coulisse* before or after the business hours of the official market. T. L.

COUNCIL BILLS (*India Council Drawings*). Bills, or cabled instructions, issued by the India Council in London on the treasuries of Calcutta, Bombay, or Madras, as desired, and sold through the Bank of England to bankers or merchants requiring to remit to India. It was not till after the Imperial government superseded the East India Company, that India Council bills were first offered for public competition in London. The Indian government found that it was necessary to make large payments annually in this country for interest upon its sterling debt and for salaries, pensions, and materials—payments which could hardly have been made by remittances in money, and for which therefore it was necessary either to secure "exchange" operations, or to obtain funds in London by additional borrowings. The latter method was first resorted to. Between 1857 and 1862 the sterling debt raised by India was increased from £4,000,000 to £35,000,000, and for the time the necessity to remit to London was obviated. Indeed the Indian government was, on balance, compelled to remit extensively to the East. At that time, too, the external trade of India did not present the remarkable features now disclosed. The exports of merchandise were mostly somewhat larger than the imports, but the movement of specie was sufficient to counterbalance this difference, and, including specie, there was, in each of the seven years 1st May 1855 to 30th April 1862, a balance of imports over exports. Then came the American War and India's opportunity, when Lancashire had nothing but Indian cotton to exist upon; and in the four years 1862-1865 the exports of India averaged £13,500,000 a year more than the imports, specie included. From that date Indian exports have constantly exceeded the imports, and that in spite of the very large amount of silver sent thither from Europe. Indeed in the past twenty years that excess of exports has in value averaged quite £15,000,000 sterling annually. Hence merchants have had on balance constantly to remit very large sums to India in payment for goods, sums quite equal to the amount of the government remittances homeward. Hence there arose the possibility that the government and the merchants should balance each other's commitments by paying them, thus obviating cash shipments out and home by a simple exchange operation. The India Council drawings constitute therefore a method whereby the Anglo-Indian merchants, or rather the bankers on their behalf, provide the cash to cover the Indian government's requirements in this country, while the government in India provides the cash requisite to cover the merchants' payments on the other side.

In 1861-62 there was a stoppage of the heavy Indian loans issued in London, and the Indian government in consequence had a balance of payments to make in England for which the Secretary of State for India drew bills to an amount of 1,20,03,592 rupees, obtaining for these in London £1,193,729, the average rate being 1s. 11d.·867 per rupee. Thenceforward the India Council drawings increased rapidly. In 1862-63 the bills drawn by the India Council realised £6,641,576, and in the following year £8,979,521. In the next five years they averaged about £6,000,000 per annum; and in the five years 1st April 1871 to 31st March 1876, these drawings realised an average of over £12,000,000 sterling annually. In the next five years the depreciation in silver became distinctly pronounced (see Table on next page); but the India Council drawings increased until, in 1879-80, bills were allotted to the extent of 18,35,00,000 rupees, realising £15,261,810. In the financial year ended 31st March 1882, the total issued was 22,21,09,350 rupees, the sum received in respect to those drawings being £18,412,429. In the twenty-seven years ended March 1889, the total drawings were 357,47,59,165 rupees, realising £303,269,974, or an average of close upon 1s. 8d. per rupee.

Time was when these India Council drawings consisted wholly of bills which were offered weekly on Wednesday by the Bank of England. Gradually the character of merchants' operations changed, and the establishment of telegraphic communication with India worked a revolution. The bill became too slow in its operation, and the Indian government found that a higher price was being paid for cabled payments than for its bills. In January 1882 it was decided to sell telegraphic transfers as well as bills, so as to obtain the additional price which remitters were prepared to pay for the advantage given by the more expeditious means of remittance. From the first, these telegraphic transfers were largely purchased. In 1892 the continued fall in the gold price of silver compelled the Indian Government to consider closing the Indian mints to the free coinage of silver, though they might be used by the Government for the coinage of rupees in exchange for gold at the ratio of 16 pence

the rupee. (See RUPEE.) This arrangement has continued ever since. At first the value of the rupee stood at about 13 pence. It has since reached and often exceeds the required rate of 16 pence. The Bank of England now announce the amounts to be offered the following week, the amounts sold, and the rates realised; these details are published regularly in the money market intelligence of the newspapers.

Official Years ended.		Amount of Bills drawn.	Sums received in respect of Bills drawn.	Average Rate obtained per Rupee.
30th April	1862	Rs. 1,20,03,592	£1,193,729	*1s. 11·867d.*
	1863	6,66,37,287	6,641,576	*1 11·920*
	1864	9,01,41,740	8,979,521	*1 11·907*
	1865	6,82,45,100	6,789,473	*1 11·876*
	1866	7,04,71,747	6,988,899	*1 11·835*
	1867	5,84,14,133	5,613,746	*1 11·064*
	1868	4,28,18,177	4,137,285	*1 11·190*
	1869	3,83,40,000	3,705,741	*1 11·197*
	1870	7,20,00,000	6,986,122	*1 11·267*
	1871	9,00,85,000	8,443,509	*1 10·495*
	1872	10,70,00,000	10,310,339	*1 11·126*
	1873	14,70,25,000	13,939,095	*1 10·754*
	1874	14,26,57,000	13,285,678	*1 10·351*
	1875	11,74,37,000	10,841,615	*1 10·156*
	1876	13,75,00,000	12,389,913	*1 9·625*
	1877	14,85,75,122	12,695,799	*1 8·508*
	1878	11,69,85,000	10,134,455	*1 8·791*
	1879	16,91,23,612	13,948,565	*1 7·794*
	1880	18,35,00,000	15,261,810	*1 7·961*
	1881	18,32,77,000	15,239,677	*1 7·956*
	1882	22,21,09,350	18,412,429	*1 7·895*
	1883	18,58,56,593	15,120,521	*1 7·525*
	1884	21,62,15,462	17,599,805	*1 7·536*
	1885	17,10,22,119	13,758,909	*1 7·308*
	1886	13,53,25,369	10,292,692	*1 6·254*
	1887	16,70,03,150	12,136,279	*1 5·441*
	1888	21,85,76 093	15,389,388	*1 4·897*
	1889	20,84,17,211	14,223,433	*1 4·379*
	1890	22,41,86,638	15,474,496	*1 4·566*
	1895	31,15,70,798	17,006,993	*1 1·10*
	1900	27,96,27,943	18,722,564	*1 4·07*
	1905	36,53,57,363	24,425,558	*1 4·05*
	1910	38,68,06,214	25,851,367	*1 4·04*
	1911	40,39,09,7?8	27,0?8,550	*1 4·075*
	1912	38,47,49,178	25,743,710	*1 4·006*
31st March	1913	42,26,19,000	28,305,827	*1 4·075*

COUNTERVAILING DUTY. A duty or surtax imposed on imported goods in order to place them on an equal footing with articles of the same class manufactured at home, and liable to excise or other inland revenue duties.

The duties of this character which are levied in the United Kingdom are intended to be the exact equivalent of the cost to the home producer of the duties levied upon his products. Thus, whilst British spirits are chargeable with the duty of 10s. 6d. per proof gallon, imported spirits are subject to a customs duty of 10s. 10d., the additional 4d. being imposed in respect of the loss and hindrance caused to the home producer by the regulations of the excise department. An interesting account of the negotiations which led to the increase of the countervailing duty from 2d., at which it was fixed by the Commercial Treaty with France in 1860, to 5d., and to its subsequent reduction to 4d., is to be found in the twenty-eighth report of the Commissioners of Inland Revenue (p. 11). Imported articles in the manufacture of which spirits are used are, in the like manner, subjected to countervailing duties, amongst the principal of these being liqueurs, perfumed spirits, chloroform, and transparent soap. On imported methylated spirits, which are not chargeable with duty if prepared according to the prescribed regulations, the countervailing duty of 4d. is alone levied. In the case of imported beer, the customs duty is 6s. 6d. per barrel of thirty-six gallons, at the standard gravity of 1055 degrees, the corresponding charge on British beer being 6s. 3d. On imported playing cards, the stamp duty per dozen packs is 3s. 9d. as against 3s. in the case of cards manufactured at home. In all these instances, the countervailing duty is estimated to be no higher than is necessary to place home and foreign producers on an equal footing as regards the real burden of the home duty. If, in any case, the countervailing duty were in excess of the amount requisite for this purpose, it would become protective in character.

The term is also applied to a duty imposed on imported articles, the manufacturers of which receive a bounty in respect of them. Thus Sir Thomas Farrer discusses the proposal to impose a countervailing duty on "bounty for sugars," and arrives at the conclusion that it would be impossible to fix the amount of such a duty, that it would be contrary to treaty stipulations, and that its effect would be to raise the price of a necessary article (*Free Trade versus Fair Trade*, p. 262). (See also remarks made by Ricardo in *Letters of Ricardo to Malthus*, "If I could convince myself that any part of the price of corn was owing to taxation, I should be in favour of a protecting duty to that amount," p. 64.)

For a complete list of the countervailing duties levied in the United Kingdom, see the *Statistical Abstract*, 1891. T. H. E.

COUNTY BOROUGH. All boroughs having a population of over 50,000, together with some old county boroughs, were, by the Local Government Act of 1888, created county boroughs so as to exclude them from the administrative business of the adjoining county. Retaining all their powers as municipal corporations, these boroughs exercise all the chief powers of county councils, whilst as district authorities they exercise powers in regard to infant life protection, mad dogs, petroleum, habitual drunkards, and slaughter houses (see CORPORATION MUNICIPAL, and COUNTY COUNCIL). J. E. C. M.

COUNTY COUNCIL. County councils were established by the Local Government Act 1888. England and Wales are now divided into sixty-two administrative counties. The council consists of elected councillors and nominated aldermen. All persons enrolled as county electors possessing property to the amount of £1000 in a county of four or more divisions, or of £500 in a smaller county, or are rated to the

poor at £30 per annum in a larger or £15 in a smaller county; all persons entitled to be so enrolled except in respect of residence, but who are resident within 15 miles of the county and have the above-mentioned property qualification; persons without property qualification but who are entitled to elect to the office of county councillor and reside within the county, peers owning property in the county, and persons registered as parliamentary voters in respect of ownership of property in the county, are qualified to be county councillors. The occupation as owner or tenant of a building of any value, provided the owner or tenant has been in occupation for twelve months and has paid the poor rate and county rate, qualifies a person to be an elector, unless he is an alien, or has received parish relief, or is disentitled under some Act of Parliament, as the Felony Act, during the qualifying period. The aldermen, who are one-third in number of the number of councillors, one-sixth in London, are chosen by the council. County councillors hold office for three years and retire together, aldermen for six years, one-half retiring every third year.

The jurisdiction of the county councils extends over:—county and police rates; duties on licenses for carriages, armorial bearings, guns, dogs, game; supervision of county treasurer; management of county halls; licensing of theatres, houses for music and dancing, and racecourses; pauper lunatic asylums; reformatory and industrial schools; bridges and main roads; fees of inspectors, analysts, etc.; coroner's salary, fees, and district; parliamentary polling districts and registration; contagious diseases of animals; injurious insects; weights and measures; sale of food and drugs; acquiring land for small holdings and allotments; exercising powers under the housing acts; enforcement of the River Pollution Prevention Act 1876; wild birds protection; licensing of magazines and factories of explosives; formation and regulation of fishery districts; deciding claims for compensation for damage by riot; local education (Acts of 1902 and 1903); and recent acts have in minor matters extended their jurisdiction.

Certain counties possess special powers. For instance, London and the metropolitan counties license music halls and racecourses, whilst the Yorkshire councils have power to make rules subject to confirmation of the lord chancellor as to the registration of deeds. Some of the general powers of county councils can only be exercised with the assent of some department of state, whilst the control of the police is vested in a joint committee composed of an equal number of magistrates and members of the council. The London Metropolitan Police are, however, under the control of the Home Secretary. The revenue of the county councils is derived from four sources: (1) The exchequer contributions, *i.e.* (*a*) one-half the net proceeds of the probate, etc., duty; (*b*) 1½ per cent of the net capital value of personal property on which estate duty is imposed in the place of probate duty, and a further contribution from estate duty in aid of rates on agricultural land; (*c*) the proceeds of the local taxation licenses; (*d*) certain duties imposed on spirits and beer. (2) Income from property belonging to the council. (3) Fees. (4) County rates (see COUNTY RATE).

Powers of borrowing for specified purposes and with the consent of the local government board on the security of the council's revenue, for any period not exceeding thirty years, have been conferred on the county councils.

The county of London succeeded to the duties and liabilities of the metropolitan board of works.

[A. Pilling, *Handbook for Council Authorities*, London, 1889.—A. Macmorran, *The Local Government Act, 1888*, London, 1888.] J. E. C. M.

COUNTY RATE. Moneys required by a county council over and above exchequer contributions, income of the council, and fees, are raised by a rate. The basis of this rate is determined in the first instance by a committee of the council, who estimate the net rateable value of each parish. The council may alter such basis, and any person may appeal to quarter-sessions against the basis, on the ground that his parish is treated unfairly. The 15 & 16 Vict. c. 81, § 2, directs the "basis to be founded and prepared rateably and equally according to the full and fair annual value of the property." On this basis the county council rates each parish at so much in the pound, and serves a notice on the guardians of the parish requiring them to pay the same. Usually the poor-law valuations are followed; but some county councils adopt the assessment to income tax, schedule A, others form a special valuation of their own. J. E. C. M.

COUPON. A certificate entitling the bearer to payment of interest on a government or other public security at the time and for the period stated on its face. These certificates are printed on the same sheet as the instrument certifying the principal security, each of them as it falls due being detached by the holder and encashed by him. The original coupons do not always cover the whole period of the currency of the security, in which case there is often a so-called "talon" which entitles the holder, when all coupons are used, to obtain a new coupon-sheet. In other cases the principal document must be presented in order to have a new series of coupons attached to it. E. S.

COURCY, ALFRED DE (1816-1888), born at Brest, died at Montmorency. At the age of seventeen he entered the employment of the "Compagnie d'assurances générales, Paris," the manager of which he afterwards became. He translated the *Théorie des annuités viagères et des assurances sur la vie*, by FRANCIS BAILY (*q.v.*) (2 vols. in 8vo). He was the author of many works on questions connected with insurance

and similar subjects. Among the more important of these are *Essai sur les lois du hasard* (in 32mo, 1862), *Un Examen de la loi du 24 juillet 1867, sur les sociétés anonymes* (in 18mo), *Un Précis de l'assurance sur la vie* (in 18mo, 1870), *Commentaire des polices françaises d'assurance maritime* (in 18mo, 1874); finally, *Le Droit et les Ouvriers* (in 8vo, 1886). His principal claim to notice, however, was the establishment in 1870 of a "caisse de prévoyance" for the employees of his company, based on the individual subscriptions of each. Many other associations have followed the lead thus given, to the advantage both of employers and employed. A law proposed by the French senate, but not, at the date of writing, ratified by the chamber of deputies, proposes to apply the same system to government officials. De Courcy's honest and laborious life was devoted to the improvement of the condition of the humble; during his last years he established the *Société de secours aux familles des marins français naufragés*. His authority on all questions of maritime risk was reckoned the highest that had ever been known in Paris. A. C. f.

COURNOT, Antoine Augustin, eminent mathematician and philosopher (1801-1877), deserves notice as the first who successfully applied mathematics to political economy. His success was signal. His *Recherches sur les Principes Mathématiques de la Théorie des Richesses*, published 1838, is still the best statement in mathematical form of some of the highest generalisations in economic science. This work may be summarised under three headings: pure theory of price, abstract propositions on taxation, and miscellaneous applications of mathematical reasoning.

I. Cournot appears to have been the first to represent by means of an equation, or curve, the relation between the price of a commodity and the quantity saleable at that price in a market consisting of purchasers competing with each other. Let D stand for quantity demanded, and p for corresponding price. Then the law of demand is expressed by the equation $D = F(p)$, or the corresponding curve whose ordinate is D and abscissa p (ch. iv.) How much logomachy is saved by this appropriate conception! How difficult it is in words to distinguish between what has been called a "rise" of demand occasioned by a change in the form of the function F, or displacement of the curve, and an "extension" of demand due to a change of the variable p, a movement along the curve. The price for which the total value is greatest is found by making the expression $D \times p$ or $F(p) \times p$ a maximum. The price thus determined is that which a monopolist would fix, on the supposition that the expenses of production are either zero, or a fixed charge independent of quantity produced, as in the case of a "mineral source." Otherwise, the expression to be maximised must be diminished by the cost of production. This cost is to be regarded as a function of the quantity produced, say ϕ (D). The relation of cost to product may be graphically illustrated by the curve $p = \phi'(D)$; where p, the price, as before is the abscissa, and $\phi'(D)$ represents the cost of producing the last unit of the quantity produced. In the most general and important case, the function $\phi'(D)$ increases with the variable D agreeably to the law of diminishing returns.

After analysing the operation of monopoly, Cournot advances from the simple to the complex by introducing a second proprietor (ch. vii.) He argues, by reasoning which has been traversed by M. Bertrand (*Journal des Savants* for 1883; cp. Prof. Marshall, *Principles of Economics*, bk. v. chap. viii. § 2, note, 2nd ed.), that with the division of the proprietorship, the price diminishes. There is, however, one curious exception to this rule. Suppose two commodities have no other use but to enter into the formation of a certain compound commodity in the fixed proportions $m_1 : m_2$. And let the "sources" from which the component commodities are derived be initially in the hands of a single monopolist; but afterwards let each of the two sources pass into the hands of an independent proprietor. What effect on the price of the compound will be produced by this breaking down of monopoly? Common sense would probably reply that the price would be lowered by increase of competition. But Cournot's reasoning concludes that the price will be raised by the separation of the proprietorship (art. 57). Cournot gives the imaginary instance of zinc and copper having no other use but to make brass. The following would be a more important example. If a railway and line of steamers have no other use except to form part of a certain through journey; then *primâ facie*, and in the abstract, it is more advantageous for the public that the two should be in the hands of a single monopolist than that they should be owned by two competing companies, each seeking independently to obtain for itself the maximum net profit. This theorem exhibits the power of Cournot's methods in a very striking light.

When by the multiplication of producers, monopoly becomes "extinct," the equation for determining price assumes a certain simplicity. It becomes of the form $\Omega(p) = F(p)$; where $D = F(p)$ is as before the demand curve; and $D = \Omega(p)$ is a curve expressing the quantity that would be offered at any assigned price. The function Ω is compounded out of the functions expressing the cost of production to each producer, in such wise as to bring out very clearly the principle that the price is equal to the cost of production of the last unit produced. In symbols $p = \phi'_k(D_k)$; where p is the price, D_k is the quantity of commodity

supplied by any one producer, and ϕ'_k a function representing the cost to that producer of the last unit produced. It is to be observed, that cost of production as used by Cournot must be interpreted as expense, exclusive of the remuneration to the entrepreneur for his own labour. Cournot does not take into account what Jevons calls the "final disutility" of labour, any more than he has expounded the theory of final utility in the case of the consumer.

II. The formulæ which take account of cost are well adapted to investigate the effect of a tax which may be regarded as an increase in cost of production. Cournot has discussed a variety of taxes, including "negative taxes," or bounties; on the supposition either of monopoly, or a regime of perfect competition. The following appear to be the most striking theorems.

If a tax of so much per unit of commodity is imposed on a monopolised article, the consequent rise in price may be greater, equal to, or less than, the tax. The loss to the monopolist is greater than the gain to the treasury (arts. 33, 38).

If a similar tax be imposed under a regime of competition, the rise in price will be less than the tax. There is no general relation between the loss to the producer and the gain to the treasury (arts. 51, 52).

Converse propositions are true of bounties. Similar conclusions are deducible with respect to an *ad valorem* tax and a tithe (chaps. vi. and vii.) There are also some interesting theorems as to the effect of taxing one of two commodities employed in a fixed proportion in the "joint production" of a certain compound, and not useful for any other purpose (art. 62).

The most remarkable results obtained by Cournot's method are those which relate to a tax on the importation or exportation of a commodity subject to the law of diminishing returns. Cournot finds that the price in the importing country may possibly be lowered by the imposition of the tax (art. 70). This paradoxical conclusion appears to the present writer to be due to a flaw in the mathematical reasoning. Equations (6) chap. x. appear not to be legitimately deduced. The following is another argument unexpectedly favourable to protection. Suppose a restriction of trade in respect of a certain commodity between two localities is removed. Cournot concludes that neither the quantity nor the total value of that commodity is necessarily increased by freedom of trade.

III. Among miscellaneous topics treated mathematically there occurs first variation in general prices. Comparing ratios to differences upon the principle which is at the foundation of logarithms, Cournot illustrates the change in the value of money in relation to other commodities by the motion of one body relative to a set of other bodies. He compares the movement of general prices caused by a change on the part of money to the apparent motion of the stars due to the revolution of the earth (chap. ii.) It will be seen that Cournot's measure of the variation in the value of money is of the nature of a mere type, or simple average as distinguished from a "weighted" index number (see INDEX NUMBERS).

The next topic to be noticed is Cournot's mathematical treatment of the foreign exchanges (chap. iii.) We may say with Jevons of this investigation that it is "highly ingenious, if not particularly useful."

It remains to speak of Cournot's theory of "social revenue" (chap. xi.) He well defines the national income so as to include the wages of so-called "unproductive" labourers. He gives formulæ for the "real gain" and "real loss" in revenue which are very similar to the methods by which statisticians would now estimate a change in the "volume of trade." In the definition of "real gain and loss" abstraction is made of the detriment suffered by those consumers who are deterred by a rise of price from purchasing and the converse advantage accruing to those who are induced by a lower price to become purchasers. The peculiarity of this definition permits the truth, while it diminishes the importance, of Cournot's paradoxical conclusion that, when a restriction of trade in respect of a certain commodity between two localities is removed, the importing country suffers a "real loss" (art. 89). Cournot himself points out the limitations of his theory He does not pretend to treat the question "au point de vue de l'homme d'État." But he adds with modest confidence, in words applicable to his whole book and the mathematical method in general:

"Il y aurait toujours de l'avantage à éclaircir en quelques lignes, à la faveur de signes précis, et d'une méthode d'argumentation plus rigoureuse, les difficultés soulevées par des volumes de controverse."

The main outlines of Cournot's system have been presented by their author in a form divested of mathematical symbol, or rather in two such forms, in two works dated 1863 and 1876 respectively. Of these versions the latter seems best to preserve the elegance of the original investigation. Both paraphrases are accompanied with some additional and valuable matter. Particular attention may be called to the criticism of Mill's theory of international trade, and to the remarks on "economic optimism." Some of these reflections may be found in an earlier work treating of the relation between the first principles of the different sciences.

Yet another debt of gratitude is owed by political economists to Cournot. In his masterly work on chances he has pointed out the bearing of the calculus of probabilities on statistics.

F. Y. E.

The following are the works of Cournot which wholly or in part relate to political economy :

Recherches sur les Principes Mathématiques de la Théorie des Richesses (1838).—*Exposition de la Théorie des Chances et des Probabilités* (1843).—*Traité de l'Enchaînement des Idées Fondamentales dans les Sciences et dans l'Histoire* (1861).—*Principes de la Théorie des Richesses* (1863).—*Revue Sommaire des Doctrines Économiques* (1876).

COURT, Pieter de la (1618-1685), born at Leyden where he succeeded his father as a cloth-manufacturer after having studied law. He emigrated to Antwerp, 1672, being an adherent of the pensionary of Holland, John de Witt, murdered that year. In 1673 he settled at Amsterdam, where he resided until his death. His principal works, all of a polemical character, are :—

Het Welvaaren der Stadt Leyden (*The Welfare of the City of Leyden*), edited for the first time, 1845, by B. W. Uittewaall, under the title *Proeve uit een onuitgegeven staathuishondkundig geschrift* (*Specimen of an unedited economical Work*).—*Intrest van Holland of te Gronden van Hollands Welvaren ungaaewezen door* v. d. H.—(Van den Hove de la Court), (*Interest of Holland, or Grounds of Holland's welfare explained* by V. D. H.), Amsterdam, 1662, translated into German 1665 (twice) and 1668. The second edition of the same work was entitled *Aanwijzing der heilsame politike gronden en Maximen van de Republike van Holland en West-Vriesland, door* v. d. H.—(*Explanations of the wholesome political doctrines and maxims of the Republic of Holland and West-Friesland*, by v. d. H.), Amsterdam, 1669, translated into German, 1670; into French, 1709, under the title *Mémoires de Jean de Witt*; into English, 1743, under the title *Political Maxims of the State of Holland, etc.* by John de Witt, Pensionary of Holland, etc. London, printed for T. Nourse at the Lamb, without Temple Bar. The fact is, that John de Witt added only some remarks, and wrote the chapters 5 and 6 of part iii., as is now placed beyond doubt. De la Court was a free-trader by conviction, but principally for the merchants' sake. Monopolies, especially those of the Indian Companies, he eagerly opposed. Industry too should be free in developing itself—guilds hinder improvement; governmental rules, prescribing the mode of producing and the quality of merchandise, give no security as to adulterations, and cannot have any salutary effect, the consumer being the only person who can judge of what he wants.

A. F. v. L.

COURT ROLLS, MANORIAL ACCOUNTS and EXTENTS. Among the mediæval documents most valuable for the purposes of economic history, must be placed those which illustrate the manorial system. These may be classified under the three heads specified above.

I. Court Rolls. The practice of enrolling the business done in the king's court seems to have been begun near the end of Henry II.'s reign. The earliest extant roll is one of 1194, and from that date onwards there is a fairly continuous series of these rolls at the Public Record Office. Some of the entries on them are of interest to the student of economic history; but the rolls that are likely to interest him more are the rolls of local, usually manorial, courts. Such rolls, not being public documents, must be sought in the libraries and muniment rooms of cathedrals, colleges, and landlords; but the Record Office has a fine collection of rolls concerning manors which at one time or another came into the hands of the king. A few lords of manors had begun to keep rolls before 1250, many before 1300; but rolls of the 13th century are not now very common. They are of great value as evidence of the condition of the peasantry, the terms on which they held their lands, and the mode in which justice was done between and upon them. The entries fall into three main classes: (1) cases of litigation between the tenants; (2) the punishment of petty offences, either against the manorial custom or against the general law; (3) the transfer of the customary tenements by surrender and admittance, for the villain or customary lands of the manor could not be alienated without being given up into the hands of the lord, who thereupon admitted the new tenant. In the earlier ages, entries of the two former classes prevail; in later times, the court almost ceases to exercise a contentious jurisdiction, and the court roll becomes little more than a register of the titles of the copyholders. The copyholders, as in the 15th century the customary tenants or tenants in villainage came to be called, acquired this name because copies of the entries on the court rolls concerning their lands served them as title-deeds. From the older rolls a great deal may be learnt about villainage, the common field system and the state of agriculture. It may safely be said that we never shall know how far the tenure of the mediæval peasant was precarious until these documents have been examined. Rolls of municipal courts, and of the courts which administered "the law merchant" in fairs and markets, illustrate another side of economic history, the condition of trade, the nature of merchant guilds and trade guilds, the treatment of foreigners and town life in general. We have some rolls of this class even from the thirteenth century. As yet hardly a beginning has been made towards publishing the court rolls; but the Selden Society's volume for 1889 contains a selection of entries from certain rolls of the 13th century which may be considered as typical.

II. Manorial Accounts. The accounts of the manorial officers, bailiffs, and reeves, are scarcely of such general interest as the court rolls and extents, but they afford excellent materials for the history of prices, and have been largely used by Professor Thorold Rogers. They have not been printed, at least on any

large scale, and must be sought in the Public Record Office and private muniment rooms. A very full and very early set of accounts relating to the Bishop of Winchester's manors is in the possession of the Ecclesiastical Commissioners.

III. Manorial Extents. The "extent" of a manor is a description of it which generally gives the names of the tenants, the size of their holdings, the legal character of their tenure, the amount and nature of their rents and services, whether rendered in money, in produce, or in labour. Generally the extent is the result of a sworn verdict returned by a jury of tenants to a set of interrogatories addressed to them by the lord's steward. To "extend" (*extendere*) a manor is to obtain by this process a full statement and valuation of all the lord's rights. On the continent, the practice of making such manorial registers can be traced to very remote times and possibly is of Roman origin. The most famous of these very ancient registers is that of the Abbey of S. Germain des Prés, made in the time of Charles the Great (published 1844 by B. Guérard under the title *Polyptyque de l'abbé Irminon*; the first volume of a new edition by Auguste Longnon appeared in 1886). The England of the days before the Conquest has apparently left us nothing at all comparable with this. But the "extent" comes in with the Conqueror, and is at once applied to England on a vast scale; Domesday Book is an extent of the realm made on the king's behalf by local juries. Gradually the lords of manors, especially the religious houses, followed the example thus set. We have a few extents from the 12th, many from the 13th century. Some have been printed; some believed to be of almost equal value still lie in manuscript.

[Among published extents are the *Boldon Book*, a survey of the Palatinate of Durham, printed as an appendix to the official edition of *Domesday*, and again by the Surtees Society.—The *Glastonbury Inquisitions* (Roxburghe Club).—The *Cartulary of Burton Abbey* (Salt Society).—The *Black Book of Peterborough*.—The *Domesday of St. Paul's*.—the *Register of Worcester Priory*.—The *Cartulary of Battle Abbey* (all for the Camden Society).—The *Cartulary of Gloucester Abbey*, and the *Cartulary of Ramsey Abbey* (both in the Rolls' series).—*The Hundred Rolls*, published by the Record Commissioners, give very valuable extents of manors in Cambridgeshire, and some other counties.]

F. W. M.

COURTEN, Sir William (1572-1636). See Interlopers.

COURTIER (Broker). See Change, Agents de.

COURTS OF LAW (England). The principal courts in England are the County Courts; the Supreme Court of Judicature; and the House of Lords. The jurisdiction of the County Courts is in most cases limited by the amount or value of the claims brought forward, *i.e.* £100 (County Courts Act, 1903, s. 3), and cases started in the High Court, not exceeding that limit, can be remitted, whether framed in contract or tort (County Courts Act, 1919, s. 1), and cases in which the plaintiff is impecunious (s. 2). On the other hand, in a proper case a County Court action can be removed for trial in the High Court, or can be sent from one County Court to another. Their jurisdiction is unlimited in bankruptcy proceedings. The County Courts have no criminal business. By s. 56 of the Act of 1888 county courts are incompetent to try actions of ejectment or involving the title to hereditaments, tolls, fairs, markets, or franchises, or for libel, slander, seduction, or breach of promise of marriage. Numerous subsequent statutes have conferred special jurisdiction, such as the Workmen's Compensation Acts, and the Restriction of Rents, etc., Acts. The various statutes relating to these courts, which were first established in 1846, have been consolidated by the County Courts Act, 1888 (51 & 52 Vict. c. 43). The Supreme Court of Judicature consists of His Majesty's High Court and His Majesty's Court of Appeal. The High Court consists of the King's Bench Division, the Chancery Division, and the Probate, Divorce, and Admiralty Division. Bankruptcy is allotted to the King's Bench Division. The High Court has original jurisdiction in all civil matters which may be brought before an English tribunal, but a plaintiff instituting proceedings in the High Court for which a County Court would have been competent has to submit to unpleasant consequences as regards costs. The active judges of the High Court are the Lord Chief Justice, the President of the Probate, etc. Division, and twenty-two puisne judges (fifteen in the King's Bench Division, six in the Chancery Division, and one in the Probate, Divorce, and Admiralty Division). The judges as a rule sit alone, but some matters in the King's Bench Division (*e.g.* appeals from County Courts) are heard by Divisional Courts consisting of two, and in exceptional cases even of three judges. In Admiralty proceedings the judge has frequently the assistance of two nautical assessors. The courts of assize, sitting periodically in the provinces, are now considered as belonging to the High Court; the matters coming before these courts are generally tried by judges of the King's Bench Division, but they act as judges of assize by virtue of a special commission issued separately on each occasion. For the purpose of the assizes England and Wales are subdivided into seven circuits. There are also district registries in the provinces attached to the High Court in which all preliminary steps may be taken. In London these preliminary proceedings take place partly in the central office, partly in the judge's chambers. Criminal causes are tried at the assizes and also (exceptionally) by the King's Bench Division. Five judges of the latter division form the Court

of Criminal Appeal, hearing appeals against conviction or sentence (Crim. App. Act, 1907, c. 23), and in cases of particular importance all the King's Bench judges sit together for that purpose. The Court of Appeal hears appeals from the High Court. It is composed of four *ex-officio* judges: the Lord Chancellor, the Lord Chief Justice, the Master of the Rolls, and the President of the Probate, Divorce, and Admiralty Division, and of five ordinary judges (called Lords Justices of Appeal). As a general rule, three judges of the Court of Appeal sit together; in particularly important cases the court is sometimes composed of six judges. The Supreme Court has been created by the Supreme Court of Judicature Act 1873 (36 & 37 Vict. c. 66), and its constitution has been modified by a number of subsequent acts. The House of Lords hears appeals from the English Court of Appeal, and from the corresponding courts in Scotland and Ireland. There are four salaried judges forming part of that tribunal who are called lords of appeal in ordinary, and who enjoy all the privileges of the peerage during their lifetime (Appellate Jurisdiction Act, 1887). Besides these, the Lord Chancellor and such peers as have held any high judicial office take part in the judicial proceedings of the House. It ought to be mentioned that the same lords and a few other members of the Privy Council form the Judicial Committee of the Privy Council, a tribunal hearing appeals from the ecclesiastical courts and from the highest courts of appeal in India and the colonies and dependencies. In addition to the courts which we have enumerated, there are a number of courts of exclusively criminal jurisdiction (such as the Central Criminal Court at the Old Bailey, the courts of quarter session and of petty session, the stipendiary magistrates' courts, etc.), and others of purely local importance (as the Lord Mayor's Court in the city of London, the Liverpool Court of Passage, etc.). W. A. B.

COURTS (IRELAND). The Courts of Northern Ireland are the following:

(1) Supreme Court of Judicature in Northern Ireland, comprising (*a*) the Court of Appeal in Northern Ireland consisting of the Chief Justice and two Lords Justices and having appellate jurisdiction subject to appeal to the House of Lords, and (*b*) the High Court of Justice in Northern Ireland having unlimited original jurisdiction.

(2) The County Courts, having jurisdiction in tort and contract up to £50, in ejectment up to £30 annual value, in equity and probate up to £500 (personalty), and £30 annual value (land), and also considerable criminal jurisdiction and several statutory jurisdictions.

(3) Petty Sessions, being courts of summary jurisdiction having civil jurisdiction up to £2, and criminal jurisdiction in minor offences.

(4) The Court of the Irish Land Commission consisting of a judicial commissioner and having special statutory jurisdiction in relation to land.

Irish Free State. The courts at present (November 1923) functioning closely resemble those in Northern Ireland, but it is intended to abolish them and to set up the following new courts early in 1924, viz.:

(1) The Supreme Court, consisting of a Chief Justice and two puisne judges and having final appellate jurisdiction.

(2) The High Court, consisting of a President and five puisne judges and having unlimited original jurisdiction.

(3) The Circuit Court, having jurisdiction in contract and tort up to £300, in ejectment up to £60 annual value, in equity and probate up to £1000 (personalty), and £60 annual value (land), and also full criminal jurisdiction except murder, treason, and piracy.

(4) The District Court, being a court of summary jurisdiction, and having jurisdiction in civil cases up to £25, and criminal jurisdiction in minor offences.

(5) The Central Criminal Court and the High Court Circuit, each consisting of a judge of the High Court and having unlimited criminal jurisdiction.

(6) The Court of Criminal Appeal, consisting of a judge of the Supreme Court and two judges of the High Court and having appellate jurisdiction in criminal matters, subject to a limited appeal to the Supreme Court.

(7) There is also in the Free State a Court of the Irish Land Commission, presided over by a judge of the existing High Court and having special statutory jurisdiction in relation to land. This court will continue under the new scheme set out above and will be presided over by a judge of the new High Court. W. A. B.

COURTS (SCOTLAND). The principal courts in Scotland are (1) the Sheriff Courts, (2) the High Court of Justiciary, (3) the Court of Session. Courts are also held by justices of the peace and magistrates of burghs.

(1) A Sheriff Court exists for each county and has an extensive civil and criminal jurisdiction (including bankruptcy jurisdiction); it is presided over by the sheriff principal or by the sheriff substitute. The sheriff principal and sheriff substitute are both salaried judges and must be trained lawyers. An appeal lies from the sheriff substitute to the sheriff principal or direct to the Court of Session, the appeal to the latter court being competent where the cause exceeds £50 in value. An appeal also lies from the sheriff principal to the Court of Session in causes over £50.

(2) The High Court of Justiciary is the supreme criminal court for Scotland. The judges of this court, called "lords commissioners of justiciary," hold sittings with juries in Edinburgh and in the larger provincial towns (Circuit Courts). Since 1887 every judge of

the Court of Session is one of the lords commissioners of justiciary. The lord president of the Court of Session, as President of the High Court of Justiciary, has the title of "lord justice general."

(3) Before the Court of Session, actions which the sheriff is not competent to try *must* be brought in the first instance; and as regards all other actions, it has a concurrent jurisdiction with the Sheriff Court. Its judges are called "Senators of the College of Justice" or "Lords of Council and Session"; the head of the judiciary has the title "lord president," and the judge next to him in rank is called "lord justice clerk." The court is divided into (*a*) the Inner House, consisting of two divisions, presided over respectively by the "lord president" and the "lord justice clerk," four judges sitting in each division, three forming a quorum; and (*b*) the Outer House, consisting of five judges who are called "lords ordinary." Actions are generally brought, in the first instance, before one of the lords ordinary, and may then go to one of the divisions of the Inner House by way of appeal, but certain matters (including appeals from the Sheriff Courts) go direct to the Inner House. Actions of a certain description coming before the Court of Session are tried with a jury, but, on the whole, the trial by jury of civil actions is not nearly as frequent in Scotland as it is in England.

Appeals lie from the Court of Session, but not from the High Court of Justiciary, to the House of Lords.

In respect of the administration of estates the Court of Session has the full powers of a court of equity. W. A. B.

COVERTURE. A legal term used to denote marriage; a married woman being said to be "under coverture." At common law coverture merged the wife's personality in that of her husband, and the result was that her property was governed by the following rules. (1) All freeholds of which she was seised at the time of marriage or afterwards vested in her and the husband jointly during their joint lives, he being entitled to the control and management and to the profits, but only able to alienate with the wife's consent. On the death of the wife, the husband, under certain circumstances, took a life interest in her heritable freeholds. (2) All chattels real vested in the husband, so that he could alienate them during his life; but if she survived him, and he had not alienated them, they vested in her. (3) Chattels personal vested in the husband absolutely, but if they were *choses in action* his title only became complete when he reduced them into possession.

It was, however, provided that if he required the aid of a court of equity to enable him to acquire the property, such aid was only given on the condition that he settled a portion of the property on the wife and children. By the Married Woman's Property Act of 1870 (33 & 34 Vict. c. 93) certain descriptions of property which at common law would have vested in the husband were declared to be separate estate, and by the Act of 1882 (45 & 46 Vict. c. 75) every woman married on or after 1st January 1883 is enabled to acquire, hold, and dispose of property as if she were unmarried. The result is that the wife's personality no longer merges in that of her husband, though in some respects she does not possess the same status as a single woman.

[Macqueen's *Law of Husband and Wife*, 3rd ed., London, 1885.] J. E. C. M.

COWELL, John Welsford, author of *Letters to the Right Hon. F. T. Baring on the Institution of a Safe and Profitable Paper Currency*, 1843—an automatic arrangement for maintaining a gold reserve, the third (or some definite) part of the outstanding notes payable on demand. This idea is reproduced in *Further Letters on Currency . . .*, 1858. Cowell contributed, as assistant commissioner, to the evidence collected by the poor law commissioners, 1834. F. Y. E.

COWRIE. A shell found on the shores of the Maldive and Laccadive Islands, and used as small change in Siam, parts of India, and on the west coast of Africa. In Guinea 2000 cowries = 1 macuta, or ten-cent silver piece, which is valued at 4·9d. F. E. A.

COXE, Tench (1755-1824), born in Philadelphia, Pennsylvania. Having entered on a mercantile life he became assistant secretary of the treasury in 1790, and commissioner of the revenue 1792-97. He early devoted much attention to economic subjects, and in 1787 wrote *An Inquiry into the Principles on which a Commercial System for the United States of America should be founded; to which are added some Political Observations connected with the Subject*, Philadelphia, 1787, pp. 52. This favoured the prohibition of the coasting trade to foreign shipping; the importation of foreign goods in the bottoms only of the country producing them, and in other respects was influenced by the commercial policy of England at that time. Coxe also demanded special encouragement to manufactures and the exemption of raw materials from tariff duties. In 1792 he published an *Examination of Lord Sheffield's Observations on the Commerce of the United Provinces*, to prove that Lord Sheffield was wrong in his gloomy prophecies for the future of the new republic. These two articles with others and additional matter may be found in a *View of the United States of America, in a series of papers, written at various times between the years 1787 and 1794; interspersed with authentic documents; the whole tending to exhibit the progress and present state of civil and religious liberty, population, agriculture, exports, imports, fisheries, navigation, ship-building, manufactures, and general im-*

provements, Philadelphia, 1794, pp. 513. He laboured energetically for the establishment of cotton manufactures, and is said to have been the first to attempt to bring an Arkwright machine to the United States. Among his other writings are *Thoughts on Naval Power and the encouragement of Commerce and Manufactures*, 1806; *Memoir on Cultivation, Trade, and Manufacture of Cotton*, 1807; *On the Navigation Act*, 1809; and in particular *A Statement of the Arts and Manufactures of the United States of America, for the year 1810*, Philadelphia, 1814. This latter was prepared under the direction of the government for the census of 1810, and represents the first extended attempt to make an industrial census of the country. The first part of this is descriptive, and the remainder statistical. As a statistical inquiry, it is almost a failure as measured by modern standards. His official papers, 1790-97, may be found in American State Papers, Finance, vol. i.

D. R. D.

CRADOCKE, Francis, author of *An Expedient for taking away all Impositions and for raising a Revenue without Taxes*, 1660; and of *Wealth Discovered . . .* 1661. The author proposes a land bank with "imaginary money," as "a discovery of richer mines than any the king of Spain is owner of." This projector was added (along with Petty) to the king's council on trade (*Wealth Discovered*, flyleaf.)

[*Quarterly Journal of Economics*, vol. ii. p. 485.]

F. Y. E.

CRAFT GUILDS. See Corporations of Arts and Trades.

CRAIG, John,*of Glasgow, author of *Elements of Political Science*, 1814; and *Remarks on some Fundamental Doctrines in Political Economy*, 1821. All Craig's remarks are not so erroneous as his doctrine that "value in use must be very accurately measured by value in exchange." F. Y. E.

CREDIT. The fundamental notion in credit, as the name itself implies, is trust or confidence, but this characteristic obviously needs limitation; for the buyer of an article must always repose some confidence in the dealer even when the transaction is for cash, and the practical rule is *caveat emptor*. There emerges then as the second principal characteristic the idea of deferred payment, taking payment in the widest sense of the term. A credit transaction involves *time* before it is completed, that is to say, a commodity, or the use of a commodity for a time, or service of some kind is rendered now, whilst the reciprocal service or commodity is given after a specified interval. Some writers have regarded this time element as really the primary characteristic, because in some species of credit transactions there is practically perfect security, and thus no demand on the confidence of the person who makes the advance. It is certainly useful to emphasise the time in some cases. In this way, for example, we understand how the ecclesiastical economists of the Middle Ages thought it sinful to demand or receive a reward on account of deferred payment, because they conceived that time in itself had no value, whilst a modern writer who looks on time as fundamental in the accumulation and use of capital, has no difficulty in giving moral approval to the reward for Abstinence (*q.v.*) Historically, however, and to a very great extent in the modern world, confidence or trust is certainly of the essence, and not merely an accident, of credit.

Much controversy has taken place as to the distinction between capital, in the sense of production capital (see Capital), and credit. The individual merchant or manufacturer regards his credit as one of the principal requisites in carrying on his business. A manufacturer with good credit can at once expand his business to meet a growing demand, whilst his inferior in mercantile standing must proceed more slowly. It thus appears that, from the individual point of view, it is naturally regarded as giving increased productive power. Then, as so often happens in economics, a simple summation is made of the advantages of individuals, and credit comes to be regarded as part of the national (production) capital, just in the same way as a national protectionist policy is fallaciously constructed from considering the gains to particular protected industries. It is evident, however, that in its simplest form, so far as production is concerned, credit cannot directly increase the actual means of production which are potentially at the service of a nation, but can only transfer the right to use these means from one member of the community to another. Credit supplies in fact (as pointed out above) a species of medium of exchange, and logically the mere exchange of products or instruments is quite different from the actual increase of commodities. Thus, credit in the ordinary sense of the term cannot be considered as part of the national (production) capital.

But although a sharp distinction may be drawn logically between exchange and production, it is obvious that in a modern industrial society exchange is practically a necessary part of production. For without exchange division of labour, which is fundamental in production, could not be carried out, and without credit exchange itself, in the present state of society, could not be effected sufficiently for division of labour. Accordingly, so far a well organised system of credit may be regarded as one of the productive forces of industry. This is well illustrated by the occurrence of commercial crises, which for the time being through the collapse of credit place a check on the production of the nation. Bagehot very justly ascribed a large part of our commercial supremacy over continental nations to the superior organisation of our credit.

At the same time, however, it seems useful to retain the old distinction so sharply emphasised by Ricardo, M'Culloch, Mill, etc., between the actual material (production) capital and the mere transference of the right to use that capital. If this is done, it will still be open to the economist to point out the different methods by which indirectly credit tends to increase production and also the accumulation of capital (in the narrower sense). (1) By means of credit capital finds its way into the hands of those who can use it to most advantage, as is shown in the increased discount of bills when a trade begins to flourish. Again many large undertakings would be impossible without credit, *e.g.* the construction of railways, the improvement of lands by funds obtained on mortgage, etc. The return for the funds immediately advanced must from the nature of the case be deferred. We may go further and say that as soon as we pass from the simplest stage of society in which the individual provides for his own wants, this deferred element which is the basis of credit comes to the front. The landowner must give credit to the *métayer* and also to the farmer, and similarly at every stage of a manufacture credit is given before the finished product is available to meet the cost of production. (2) By means of credit also the amount of national capital available for production is increased. Those whose savings would be too small (*e.g.* the working classes) if used alone, and those (*e.g.* the professional classes) who cannot use their wealth in material production, are enabled by credit institutions and all kinds of joint-stock associations to add to the means of production. In former times, as Adam Smith points out, almost the only means of employing possible surplus wealth was by keeping large numbers of retainers who were for the most part unproductive consumers.

The effects of competition in increasing the efficiency of production in spite of the defects of the *entrepreneur* system, have often been pointed out (*e.g.* by Walker), and even the socialists often allow that from the production point of view simply the *régime* of competition is perhaps superior to that of organised state control. But credit is evidently essential to the full development of competition, and the growth of credit is historically one of the most marked characteristics of the progress of society from status to contract. In nearly all contracts there is a deferred element on one side at least, in other words nearly all contracts involve credit, and thus again, indirectly at least, credit, by giving play to freedom of contract and competition, increases production.

Even taking the comparatively narrow view of Mill on the relations of capital to industry, we learn that although industry is limited by capital it seldom comes up to that limit, and we may add the more perfect the credit organisation the greater the mobility of capital, and the nearer it approaches to the limit. And when we take the wider definitions of capital (see CAPITAL), now generally accepted, it seems possible to include certain species of credit directly under capital. An effective system of banking certainly increases the revenue not only of bankers but of the nation at large, and the "bank money" of the money market is to a great extent purely the creation of credit, and is as efficient as actual coin. It may of course be said that it is only "representative" money, but it is the result of highly-skilled labour and of reservation for future needs which are the general characteristics of capital. Thus JOHN LAW (*q.v.*) in his famous system was guilty not of a direct fallacy, but rather of exaggerating a truth from the theoretical standpoint; and practically, as he himself pointed out, he failed by trying to compress within too short a time what must take generations for its development. Credit effects a very great economy of the national resources, and thus may fairly come under revenue capital. Nor does this view appear to clash with popular usage, for we find in estimates of national capital that account is generally taken of the capital of banks and insurance societies and the like, although strictly, and taking only material (production) capital, this would involve counting the same elements twice over.

[Besides the treatment of credit in the text-books, the reader may consult the masterly work of Knies (*Der Credit*), which gives a critical historical survey as well as an original view of the theory, and the article by Wagner in Schönberg's *Handbuch*, which, *more Germanico*, gives a complete bibliography up to date. For the views of Mr. Macleod on credit see his works.] J. S. N.

CREDIT. INFLUENCE ON PRICES. Credit supplies the means whereby the transfer of wealth from one person to another is effected for a period of time, at the end of which it is restored to its owner. Having given this very general description of credit, it is necessary to be more specific. Thus, credit may be given in the form of commodities transferred by a tradesman to a customer, and paid for in money after an interval. In this case, the "consideration" for the credit given is sometimes not mentioned, but as a matter of fact it is obtained by the tradesman in the form of an addition to the price. Sometimes it is expressly understood that when goods are sold, some rate of interest on the cash price will be charged if they are not paid for at once. This form of credit, however, is of little importance from an economic point of view, though it is of importance in other ways. The only prices it affects are retail prices.

The credit given in wholesale transactions is

of much greater interest to the economist. It is a powerful agent for influencing prices, since it gives rise to what are known as bills of exchange (see BILL BROKING; BILL OF EXCHANGE), with all the consequences which their use brings with it. In this case, however, the credit is given, or at any rate is supposed to be given, as the result of a transaction in commodities, that is in real articles of definite value such as actual bales of cotton, or cotton cloth, pigs of iron, or other goods. The bill is drawn by the seller on the buyer, and the buyer "meets" it in three, four, or six months' time according to the nature of the bill. He gets the money, however, at once, by "discounting" the bill with his banker, who keeps it until it is due; or the drawer may discount it with a bill-broker if he has facilities for such an operation, who in his turn may sell it to a banker, or employ it as a "security bill" in his business. When any particular trade is active and profitable, bills arising out of it appear in increased numbers. They not only enable the drawer to use the money due to him for a sale at once, and set the drawer free from the immediate need of finding money to pay for what he has bought, but they may also be used as a basis for a temporary increase of the credit commanded by the person who discounted them. Bill-brokers sometimes pledge bills they have bought with bankers, as security for a short loan, and this leads to the consideration of another form of credit, which is even more effective than bills as an instrument for raising prices.

Bankers' Advances.—Many people suppose that a banker's "deposits" are solely the result of the paying in of money to the customer's account. As regards private individuals this is so in the main (see DEPOSITS), but a considerable part of a business man's deposit is the result of advances made to him, usually but not always on security. A successful manufacturer or merchant has no difficulty in getting such advances except in times of abnormal pressure in the money market, sometimes as an "overdraft," though this mode of giving credit is rarely adopted by banks in the metropolis, but usually as a loan, provided he can satisfy his banker that the operation he wants the money for is a sound one. In times of great trade activity a great deal of the money in the hands of bankers is placed at the disposal of enterprising men of business, and in these circumstances prices generally are apt to rise very rapidly, especially if the men to whom the advances are made are engaged in one or two of the leading trades of the country. A considerable rise in the price of coal and iron is sure to produce a rise in most other articles of commerce, and during the middle stages of a general rise in prices, money is lent freely, and under these circumstances the economic organism is in a state of the highest efficiency. Credit is then at its *maximum*, and exercises its fullest effect on prices. Later on, when prices have risen very much, bankers become aware that the total volume of their customers' obligations is larger than is quite safe, and they therefore make advances with more caution.

Bank Notes.—It used to be thought that bank notes were the most powerful of all agents for raising prices, but that idea has long been abandoned, though it has been true where the notes are inconvertible. All authorities are now agreed that convertible notes cannot be over-issued. Inconvertible notes can be and have been over-issued, but they cannot be kept in circulation at par unless their issue is carefully restricted to meet the actual needs of the commercial community, as was done with consummate skill by the Bank of France after the war of 1870. An excessive issue of inconvertible notes may raise prices enormously. Theoretically the rise will be equal in all articles, but in practice some commodities are usually affected more than others. One peculiarity of an excessive note issue is that it operates primarily on retail prices instead of on wholesale prices as an expansion of banking credit does. In some countries—in Scotland, for instance—*convertible* notes are an important part of the machinery by which the business of bankers is carried on. A person in a small way of business, for whom an account is opened by a Scotch bank, may take a large part of what he requires in the bank's own notes, which thus practically take the place of Cheques. The system works well in Scotland, and it is quite probable that it would also work in England, though it is questionable whether it is absolutely needed, as owing to the great extension of the cheque system any person who has a good business, however small, can obtain the support of a banker. In any case a sound, that is a convertible, bank note issue cannot be nearly as effective an agent for facilitating the expansion of business as the system of advances, or "book credits," as Mill called them. Such credits are capable of expansion, limited only by bankers' opinion of the solvency of their customers. That opinion may at times be wrong, and then too much money is lent to the wrong people, prices are forced up too high, and a commercial crisis ensues.

Cheques.—The cheque system is a necessary part of the banking system, and cheques are not, in the first instance, a form of credit at all. If a bank's customer merely draws against cash actually deposited by him, it is obvious that the cheques he draws to pay debts or to provide himself with cash for daily use are not credit instruments, except to a very limited extent. Even when a cheque is drawn against an advance granted to the customer by the bank, it is not the cheque which is the instrument of credit but the advance itself. But when, as is occasionally the case, cheques pass through

several hands before being presented to the bank on which they are drawn, they become instruments of credit, taking the place of coin or notes in the district where they circulate. In England, where a large proportion of people have banking accounts, cheques do not circulate long in this way, for they almost immediately reach the hands of some person who pays them into a bank, by whom they are "cleared" in the usual manner, but there is reason to think that in countries where banking is less developed than in the United Kingdom, cheques on banks of great reputation are made to do a good deal of work as an aid to the coin and note circulation. Cheques on London banks given to hotel-keepers on the Continent often "remain out" for months, and when finally cleared are covered with the endorsements of the persons and firms through whose hands they have passed. Such cheques have, during the period in question, formed a real addition to the circulation of the districts they have traversed.

Foreign Cheques.—During the last ten or twelve years there has been an important extension of the cheque system in connection with foreign trade, cheques drawn in Berlin and Paris on a London banking house having become negotiable instruments payable at sight, just like a cheque drawn in Manchester on a London bank, so close are the relations between these two great capitals and London. A still more remarkable feature of modern business is the use of "telegraphic transfers," which are largely used in trade with India and the United States. They are of course merely orders sent by bankers to their agents in foreign cities to pay specific sums over to certain persons, but they greatly facilitate the operations of merchants and bankers.

Among the arrangements which have facilitated the extension of credit must be included the clearing houses established in London, Manchester and New York (see CLEARING HOUSES; CLEARING HOUSE, THE LONDON BANKERS', App.)

[Ricardo, *Works* (M'Culloch), ch. xxvii.—Mill, *Political Economy*, bk. iii. ch. xi. xii. and xiii.—F. A. Walker, *Money*, pts. ii. and iii.—Bagehot, *Lombard Street*, *passim*.—Adam Smith, bk. ii. ch. ii.]

W. H.

CRÉDIT FONCIER OF FRANCE. This institution is intended to enable house and landowners to raise money on mortgage at a low rate of interest, with facility of repayment by an annuity including redemption of the capital. The foundation of the *Crédit Foncier* was due to the economist M. Wolowski. It dates from 1852, but had been preceded in 1820 by a mortgage bank called the *Caisse Hypothécaire*, which, after a struggling existence, was finally liquidated in 1846. The new establishment was created under governmental patronage, and invested with special privileges which constituted a virtual monopoly. The original idea was to found a number of mortgage banks, each with its operations confined to a prescribed region. Three only were organised, those of Paris, Nevers, and Marseilles; the last two were afterwards absorbed by the first, the operations of which were then extended to the whole of France. They were styled *Banques Foncières* with the name of their locality. On their amalgamation the subsisting one was at first called the *Banque Foncière de France*, but on representations by the *Bank of France*, which feared a confusion from the similarity of names, the title was changed to that of *Crédit Foncier de France*. The operations of this establishment were at first restricted to loans on houses and rural property, with or without redemption by a sinking fund. They were extended in 1858 to loans for drainage; in 1860 to Algeria, and in 1860 the *Crédit Foncier* was authorised to lend to towns and departments for public works and improvements. This last extension contributed in a great measure to the vast public works commenced under the empire and since continued. The *Crédit Foncier* was also empowered in 1860 to make advances in the form of discounts to the *Sous-Comptoir des Entrepreneurs*, a contractors' bank, which lends on mortgage to builders after their work has reached a certain stage, and while in progress; the *Crédit Foncier* itself only granting loans on houses when ready for occupation. When the buildings are finished the bills discounted by the *Sous-Comptoir*, and rediscounted by the *Crédit Foncier*, are cancelled by a regular mortgage to the latter company. The *Crédit Foncier* patronised in 1861 the formation of the *Crédit Agricole*, instituted to make advances to agriculture not authorised by its own statutes, and which it assisted in a similar manner by rediscounts. This involved the *Crédit Foncier* in difficulties in 1876, the *Crédit Agricole* having imprudently taken in nearly seven millions sterling of treasury bills of the Egyptian floating debt, and passed them on to the *Crédit Foncier*. The Egyptian government having made default, the *Crédit Agricole* had to go into liquidation, and was merged in the *Crédit Foncier*, shareholders receiving a part of their capital in new *Crédit Foncier* shares. The *Crédit Foncier* absorbed in 1882 a rival mortgage bank, the *Banque Hypothécaire*, which had been founded on the expiration of the exclusive privilege (granted for twenty-five years) of the former. This led to a further creation of shares, and as the business of the *Crédit Foncier* increased, new capital was raised, the right of issue of mortgage and communal bonds being limited to twenty times the share capital, the amount of which then rose to £6,820,000, with a limit of £8,000,000. The government exercises a direct control over the *Crédit Foncier* by appointing the governor and two deputy-governors. Decisions of the elected

board of directors must be approved by the governor. The *Crédit Foncier* enjoys the special privilege of issuing bonds which, in addition to the fixed interest, give a right to drawings for prizes. Each issue of bonds with a lottery requires, however, a special authorisation by the government. The *Crédit Foncier* can only lend on first mortgage, and to the amount of one-half the estimated value of houses and farms, and one-third of that of vineyards, woods, and other plantations. The share capital in 1914 was £10,000,000 divided into 500,000 shares of £20; this may be raised to £12,000,000 when the bonds in circulation amount to twenty times the share capital; the increase may be made in one or in two operations. The rate of interest on the loans may not exceed by more than 60 centimes per cent the rate of the return (interest, lottery-fees, and other charges) from the bonds in circulation at the time when the rate of interest on the loans is fixed. The annual payment (interest and sinking fund) is 12·74 per cent for a loan to be redeemed in ten years; 7·87 per cent in twenty years; 5·33 per cent in fifty years; and 4·99 per cent in seventy-five years. During the War it became necessary to raise the rate of interest on mortgage loans to 7·15 per cent. The rate in 1922 was 8·25 per cent. The total amount of the mortgage loans granted since the origin of the *Crédit Foncier* (1852) to 31st December 1913 was £267,112,247; of this £32,792,993 has been paid off in annual sums, £131,401,465 has been paid off at earlier dates than the time fixed, and £102,917,789 remains outstanding. The mortgage loans issued in Paris and in the department of Seine amounted to £154,097,492, and in the other departments, Algiers and Tunis, to £113,014,754. The communal and departmental loans issued, 1860-1913, amounted to £187,198,535, of which there still remained to be redeemed (31st Dec. 1913) £94,705,378. The nominal value of the bonds in circulation at that date was £218,641,540; the balance in circulation, £178,732,795. The charter of the *Crédit Foncier* was extended for ninety-nine years from 1881.

[C. Gide, *Principes D'Économie Politique*, Paris, 1889; A. Courtois, *Histoire des Banques en France*, Paris, 1881; *A History of Banking in all the Leading Nations*, New York, 1896. *Économiste Français* and *Monde Économique*, *passim*.]

T. L.; F. W. G.

CREDIT, LETTER OF. A letter addressed to a banker, or some other person or firm, containing a request to make payments or give acceptances to a third person or firm for account of the writer or writers of the letter. Sometimes the letter, instead of being addressed to one particular person or firm, is directed to a number of banks, with an indication that all payments must be indorsed on it by the parties effecting them, so as to show what amount remains unused. A letter of this kind is called a circular letter of credit. Circular letters of credit are also issued in the form of a request to the banks to whom they are addressed to purchase the holder's drafts on the bank who issued the letter, such drafts to be drawn on the forms which are handed to the holders of the letter of credit, each of these forms being marked with a fixed amount. Another class of letters of credit—commonly called confirmed letters of credit—is much used in mercantile transactions with foreign countries. These letters are addressed to the person to whom the credit is granted, and contain an authority to issue drafts up to a certain amount on the writer or writers; and also an undertaking, not only as against the drawer, but also as against all *bona fide* holders, to accept such drafts, provided they are issued within a certain time. If the credit is given for the purchase of goods there is a further condition added, according to which shipping documents of a value corresponding to the amount of the drafts must accompany or precede them.

E. S.

CRIMINAL PROSECUTION in Scotland is conducted by public prosecutors, and private prosecution, which cannot take place without the "concourse" or concurrence of the lord advocate, is almost unknown. When a crime has been committed, all who are supposed to be able to give evidence are called to testify before a magistrate in private: the suspected person may also make a declaration, which may at once be satisfactory and entitle him to liberation; if not, he is at once, or after further examination, committed for trial before a jury of fifteen, who acquit, condemn, or find "not proven," by a majority.

CRISES, COMMERCIAL AND FINANCIAL. Times of difficulty in commercial matters are, when pressure becomes acute, termed crises. The crises of 1857 and 1866 will be described in some detail. The most important ones which have occurred since the end of the 18th century likewise deserve notice; those earlier than that date, though historically of interest, exhibit features which have little in common with the methods of conducting financial and commercial business at the present day. The crisis of 1792-93, of which Macpherson (*Annals of Commerce*, vol. iv. p. 266) was the historian, is described by him as having followed heavy investments "in machinery and in land navigation." The number of bankruptcies was unprecedented. "Many houses of the most extensive dealings and most established credit failed; and their fall involved vast numbers of their correspondents and connections in all parts of the country." The usual features of a panic followed. Temporary loans became almost unattainable; hoarding followed. "It was impossible to raise any money upon the security of machinery or shares of canals, for

the value of such property seemed to be annihilated in the gloomy apprehensions of the sinking state of the country, its commerce and manufactures; and those who had any money, not knowing with whom they could place it with safety, kept it unemployed and locked up in their coffers." At a meeting of some of the principal merchants and traders in the city (23rd April 1793) the government was asked to assist business houses of real substantial standing by advances of exchequer bills. To this Mr. Pitt, then prime minister, agreed: the result entirely justified his resolution. "The very first intimation of the intention of the legislature to support the merchants operated all over the country like a charm, and in a great degree superseded the necessity of the relief by an almost instantaneous restoration of mutual confidence." A similar plan to that adopted in London was pursued in Liverpool, and parliament authorised the corporation of Liverpool to issue negotiable notes to the amount of £200,000 in support of the credit of individuals. Tooke mentions (*History of Prices*, vol. iv. p. 272) that in 1792, although the bank rate of discount was not reduced below 5 per cent, the market rate had fallen to, or below, 3 per cent per annum, and the 3 per cent consols had reached 97¼ in the March of that year. "This comparatively low rate of interest had been, in some degree, both a cause and an effect of the great extension of the country bank system, which about that time took place." Too heavy advances on insufficient or inconvertible securities, and an overstimulated spirit of mercantile enterprise, appear to have been the causes of this crisis.

During the year 1796, and at the commencement of 1797, a severe pressure in the money market, extensive failures of banks in the north of England, and great mercantile discredit prevailed. The difficulties experienced were very great. At a meeting held in the city, 2nd April 1796, resolutions respecting the "alarming scarcity of money" were passed, and affirming "that this scarcity proceeds chiefly, if not entirely, from an increase of the commerce of the country, and from the great diminution of mercantile discount which the Bank of England has thought proper to introduce in the conduct of that establishment during the last three months." A plan was drawn up for a board to be constituted by act of parliament for the support of credit. They were to issue promissory notes, payable six months after date, bearing interest at the rate of £1 : 18s. per cent per annum, upon receiving the value in gold and silver, Bank of England notes, or in bills of exchange not having more than three months to run (Tooke, *History of Prices*, vol. i. p. 201). This proposal was not carried out. The pressure was aggravated to a great extent by alarms prevalent at the time.

The next serious crisis, taken in chronological order, took place in 1810-11. A careful history of the events which led to this disturbance is found in Tooke (*History of Prices*, vol. i. p. 303). A great advance, and an enormously high range of prices in this country, in 1808, while on the continent they were low, through the operation of the same causes which made them high here (see CONTINENTAL SYSTEM), induced merchants to make great efforts to overcome or elude the obstacles to trade. Heavy importations took place, a great fall of prices followed, so great that in many instances the importer, after paying for the enormous charges on importation, was left with nothing whatever to meet the previous cost. Simultaneously a total stop was put to the exports from this country to the Baltic. Here, as Tooke remarks, all the incidents which lead to a severe crisis were present. "So many circumstances, on so large a scale, combining in the same direction, the fall of prices, the reduction of private paper, and the destruction of credit, were greater and more rapid than were before, or have since been known to have occurred within so short a space of time." In August 1810 several failures of banks, and of important business houses were reported (monthly *Commercial Report*, 1st August 1810). It is stated—"speculations in Spanish wool, an article which has fallen about 50 per cent, are considered as the origin of those unlooked-for disasters. Five Manchester houses have stopped payment in the city, and we are sorry to add, have involved numerous industrious persons, both in town and country, in their ruin. The demands upon the five houses are said to amount to two millions; but it is supposed that their real property will ultimately cover all deficiencies. Speculative exports to South America are the rock upon which these houses have split. In consequence of these unexpected events, public credit is at the present moment as low as ever it has been in the memory of man." The report continues, 1st December 1810—"A numerical evidence of the present state of trade may be deduced from the number of bankruptcies in the *London Gazette*. They amounted—

This month in	1810	to 273
The same month	1809	,, 130
,, ,,	1808	,, 100
,, ,,	1807	,, 97
,, ,,	1806	,, 65
,, ,,	1805	,, 87
,, ,,	1804	,, 60

besides stoppages and compositions equal in number to half the traders in the kingdom! These failures throughout the kingdom have wonderfully affected the manufacture of every description of goods; and a general want of confidence exists between the manufacturer and the export merchant" (1st January 1811). "In our last report we stated the vast increase

of bankruptcies within the last month compared with similar months for seven years back ; and we regret to say that they still continue to increase in number, and that confidence in the mercantile world seems nearly at an end. . . . In Lancashire the cotton manufacturers appear, by the late gazettes, as well as by private information, to be greatly distressed, and business quite at a stand. In Manchester and other places houses stop not only every day but every hour. Cotton wool is in no demand at any price, and no export of the manufactured goods, except a few fine sorts to Rio, etc. The trade of Birmingham, Sheffield, etc., quite at a stand, and no orders for execution there, except a few for our home consumption." A reference to the parliamentary debates in the spring of 1811 will show that this is no exaggerated description. A select committee of the House of Commons made inquiries into the state of commercial credit, and reported that the statements as to the great embarrassment and distress were founded on fact, and that it "had arisen out of great and extensive speculations, which commenced upon the opening of the South American market in the Brazils and elsewhere, to the adventures of British merchants." The chancellor of the exchequer (Hon. S. Perceval) referred to the subject in his speech during the debate on the Commercial Credit Bill ; and after mentioning the report of the select committee, he continued, "the distress, originating with the merchant, and disabling him from paying the manufacturer, was felt most severely by the manufacturer and those employed by him. All the principal manufacturers had been compelled to contract, and some wholly to suspend, their works. It appeared by the report that there was scarcely a cotton manufacturer in the kingdom who had not diminished by one half the number of persons employed in his mills ; and that many of the smaller manufacturers had discharged their people altogether." Those employed by the manufacturers who still carried on business were retained at lower wages, and "the most calamitous distress" is described as prevailing in many of the manufacturers' districts. The commercial troubles of the time were not confined to the United Kingdom ; the condition of trade in the United States was fully as bad. Tooke quotes a letter from New York, dated 11th February 1811, which states that : "Such times for money were never known, and all confidence among merchants is totally, and indeed very justly, destroyed." This crisis appears to have been one of great severity ; in reference to it and to the further and even heavier troubles of 1825 the very artificial conditions of business induced by the restrictions on trade imposed by the great war waged at the commencement of the century in Europe, must be borne in mind. Tooke gives (*History of Prices*, vol. i. pp. 308-314) many details of the heavy charges which had to be paid by merchants. Thus the freight and insurance on hemp from the Baltic to London was, 1809, in some instances from £40 to £50 per ton. The charge of conveyance of silk from Italy to Havre amounted nearly to £150 per bale of 240 lb. The following cases referred to, occurring between 1809 and 1812, are even more extraordinary. "The charges of freights and French licence on a vessel of little more than 100 tons burden, have been known to amount to £50,000 for the voyage merely from Calais to London and back ; this made the proportion of freight on indigo amount to 4s. 6d. per pound. A ship, of which the whole cost and outfit did not amount to £4000, earned a gross freight of £80,000 on a voyage from Bordeaux to London and back." Tooke says of this period (*History of Prices*, vol. iv. p. 273), "the commercial distress and banking discredit of 1810-11 nearly equalled, in point of intensity, those of 1792 and 1825 ; and the losses caused by the fall of prices in 1810 were, I am inclined to think, greater than they had been at any former period. In the still more violent fluctuation of prices which took place between 1812 and the close of 1815, it is possible that the losses were greater ; but there was not then any such sudden and extensive revulsion of credit and commercial distress as occurred in 1810-11."

The next serious crisis occurred in 1825, one of the most severe through which the commercial and banking systems of the country had ever passed. At this date speculation ran very high, for the most part in loans and mining adventures, and other investments abroad. The foreign exchanges were so much depressed as to be the cause of a nearly continuous drain on the bullion of the bank. This foreign drain, Tooke remarks, was not counteracted by any operation of the bank ; it was suffered, he observed, to run its course, till it ceased of its own accord, that is by simple efflux, towards the close of the summer. Many and heavy banking failures, and a state of commercial discredit, preceded and formed the earlier stage of the panic. The tendency to speculation, and the undue extension of credit, was preceded, probably caused, and certainly favoured and promoted, by the low rate of interest which had existed for some time previously ; and this low rate of interest was apparently prolonged by the operations of the Bank of England. Facility of banking accommodation which had existed for some time previously, favoured undue extension of credit.

This gradually led on to the great difficulties of the year.

In the summer of 1822 the bank reduced its rate of discount from 5 to 4 per cent. The course of the rate of interest is marked by the following statement of the price of the 3 per cent public funds.

1823.	3rd April . .	73½
,,	1st July . .	80¾
,,	3rd October .	82½
1824.	1st January .	86
,,	2nd April . .	94⅜
,,	28th ,, . .	97¼ (the highest)
,,	November . .	96¼
1825.	January . .	94½
1826.	14th February .	73⅞ (the lowest)

The great severity of the pressure extended over a very short time, hardly more than three weeks. Some banking failures, principally in the provinces, in the month of December, were followed by the failure of several banks in London. A severe drain on the resources of the bank of England took place—"the lowest amount of the bank treasure was on the 24th of December, viz.,

Coin . . .	£426,000
Bullion . . .	601,000
	£1,027,000

"The accidental discovery, for such it was said by Mr. Harman, in his evidence in 1832 (Bank Charter Report, 1832) to have been, of an amount of £1 notes which had been put away in the bank was, doubtless, a fortunate circumstance; for, although the sum was not large (between £700,000 and £800,000), it served to meet the peculiar difficulty of that time, which consisted in an extensive discredit of the small note country circulation. And it is probable that it had an immediate and very great effect in stopping the demand from the provinces for gold" (Tooke, *History of Prices*, vol. iv. p. 343). Though the period of pressure in 1825 was so short, it had been preceded by considerable and extravagant speculations in foreign loans and shares of companies, mining and commercial. Besides several mining companies for operation in Mexico, Chili, Brazil, Peru, and the provinces of Rio de la Plata, "so great was the rage for speculation that, in the course of a very few weeks, in the early part of the year (1824), the following undertakings, among others, were brought forward in London, and found subscriptions courting their acceptance:—The Alliance Fire and Life Insurance Company, with a capital of £4,000,000; the Palladium Fire and Life Insurance Company, with a capital of £2,000,000; the British Annuity Company, whose capital was £3,000,000; the Metropolitan Investment Company, with a capital of £1,000,000; the Thames and Isis Navigation Company, with a capital of £120,000; an Ale Brewery Association, with a capital of £200,000; a company for obtaining from government a grant of a million of acres in New South Wales, and for improving the growth of wool; an association for the cutting a canal across the Isthmus of Darien" [a curious anticipation of the enterprise of joining the Atlantic and Pacific oceans by the great Panama canal]. More than thirty private acts were brought forward in the House of Commons to give effect to these projects. "In all these speculations, only a small instalment, seldom exceeding five per cent, was paid at first; so that a very moderate rise on the prices of the shares produced a large profit on the sum actually invested." Tooke describes the spirit of speculation aroused as follows. "This possibility of enormous profit by risking a small sum was a bait too tempting to be resisted; all the gambling propensities of human nature were constantly solicited into action; and crowds of individuals of every description—the credulous and the suspicious, the crafty and the bold, the raw and the experienced, the intelligent and the ignorant; princes, nobles, politicians, placemen, patriots, lawyers, physicians, divines, philosophers, poets, intermingled with women of all ranks and degrees (spinsters, wives, and widows)—hastened to venture some portion of their property in schemes of which scarcely anything was known except the names."

The extent of the speculative rise in prices is well shown by the following instances of the upward movement in market prices of five of the principal mining companies.

	10th December 1824.			11th January 1825.		
	£	£	£	£	£	£
Anglo-Mexican	100 sh.	10 pd.	33 pr.	158	115	125
Brazilian . .	100	10	10s. dis.	66	70	44 pr.
Columbian . .	100	10	19 pr.	82	62	59
Real del Monte	400	70	550 — 1350			
United Mexican	40	10	35 —	155	115	125

The recoil from these speculations was inevitable. The country banks, whose advances and whose issues of notes had both exceeded the limit of prudence, were among the principal sufferers. Several London banks likewise failed. A remark made by Mr. Huskisson, "that we were within a few hours of a state of barter," has often been quoted as showing the severity of the trial the country passed through. The turning point appears to have been in the week ending Saturday 17th December 1825. On that day, according to a statement made by Mr. Richards, then deputy governor of the bank, "whether from fatigue, or whether from being satisfied, the public mind had yielded to circumstances, and the tide turned at the moment on that Saturday night." The greater part of 1826 was a time of considerable depression, but by 1827 the trade and manufactures of the country had resumed their usual and steady course.

The monetary disturbances of 1836-37 are not included by Tooke among the memorable commercial crises (*History of Prices*, iv. p. 269). "It was confined in a great measure to two branches of trade, the American and East Indian including China. The bank raised its rate of discount to 5 per cent, and laid some restriction upon the bills of the American houses, who were notoriously overtrading. But for purposes

of trade generally there was no want of accommodation; and the utmost rate that was heard of was 6 and 7 per cent for fair commercial bills of moderate length. And, with the exception above mentioned, there was depression in the prices of produce." The derangement of trade in 1836-37, as well as that of 1839, appears to have been but slight.

Of a far different character was the crisis of the year 1847. As was the case before the crisis of 1825 came on, a considerable period of speculative activity, fostered by a low rate for money, preceded this crisis also. Another circumstance has to be noticed. The bank act of Sir R. Peel came into operation 2nd September 1844. The automatic arrangement for the management of the note circulation which that act introduced took away from the directors alike any power or any responsibility for the "regulation of the currency" so far as this consisted of their notes. This responsibility being removed, the old arrangement by which a fixed or nearly fixed rate of discount was usually charged passed away as well. The demand for money being extremely slack at the time, a charge of 4 per cent, as their rate then was, had kept the bank entirely out of the market. On 5th September 1844 the rate was lowered to 2½ per cent for first-class bills, with not more than ninety-five days to run, and to 3 per cent for notes. 13th March 1845, the rate was placed at 2½ per cent, both for bills and notes, a lower rate than had ever been previously charged. The published rate was also for the first time stated (March 1845) to be the minimum rate, and this form of announcement has been continued ever since. The fact that the bank competed now, practically for the first time, with the bill brokers in the open market was a very important factor. The bank soon became a large holder of commercial bills, and exercised a great influence accordingly. Meanwhile several other causes had contributed to the stringency of affairs which deserve attention. Such causes are usually to be traced to reasons which have been in existence for some time previously. Previously, both in 1825 and 1847, considerable reductions had been made in the interest paid on the public funds. This had in 1825 the effect of turning people's minds to foreign investments. In 1847 speculation was chiefly directed to the development of railways and other improvements at home. "In social and financial interest and importance railways far surpass the other agencies of transport. The creation of the present century, they have contributed largely to promote its special characteristics." Prof. Bastable, *Public Finance*, London, 1892, bk. ii. ch. iii. § 12. Up to 1846 their progress had been slow.

The amounts which parliament had authorised railway companies to raise are given in Porter's *Progress of the Nation*, p. 327, as follows—

Railway Capital.		Yearly Average.
	£	£
In four years 1826-29	3,267,000	817,000
,, ,, 1830-33	8,629,000	2,157,000
,, ,, 1834-37	43,522,000	10,880,000
,, ,, 1838-41	14,458,000	3,614,000
In two years 1842-43	9,173,000	4,586,000
In one year 1844	17,870,000	17,870,000
,, ,, 1845	60,824,000	60,824,000
,, ,, 1846	132,096,000	132,096,000

The enormous increase in this class of expenditure, after 1841-43, explains of itself great part of the monetary difficulties which succeeded. Tooke gives (*History of Prices*, vol. iv. p. 314) an estimate of the actual outlay on labour and materials of railways about this period which is very instructive.

Estimated Outlay on Labour and Materials (Railways).

1841 . . .	£1,176,000
1842 . . .	2,384,000
1843 . . .	3,548,000
1844 . . .	4,880,000
1845 . . .	11,280,000
1846 . . .	29,188,000
1847, first half-year	20,560,000

After an outlay which in the first half of 1847 had been nearly two-thirds of the whole of that in 1846, this class of expenditure was sharply arrested. The effect of these different operations—(1) a sudden immensely increased outlay of capital on fixed investments; then (2) an even more sudden and sharp stop put to this outlay—on the business of the country may be well understood. Meanwhile, simultaneously with this double derangement to the ordinary course of transactions, a wild speculation in railway stocks went on.

Some idea of this may be obtained from a very careful paper read before a meeting of the Statistical Society, January 1847, by Mr. Dawson.

"Between March and September 1845 joint-stock speculations for the immediate investment of capital were set on foot, involving a larger aggregate amount than had ever before been so involved in this country. The amount to raise which, for railways alone, the sanction of parliament was actually applied for in the following session, exceeded £340,000,000 sterling. And if we include all the new schemes in which scrip, or letters of allotment, were actually selling in the market at a premium in July, August, and September 1845, the amount cannot be estimated at less than £500,000,000.

"Many of the schemes of 1845 reached a high premium within a few weeks after their issue; and all those first in the market, and having any substantial merit, were raised considerably above their true value. For instance, the Leeds and Thirsk Railway—£50 shares, with only a deposit of £2 : 10s. paid—were selling in March at £3 : 10s., in September at £23 : 15s., and in November at £4 : 15s. per share. Again,

the Bolton, Wigan, and Liverpool—£40 shares with £4 paid—were selling in January 1845 at £4 : 10s. ; in September at £42 : 15s. ; and in December, when £9 had been paid, at £20 per share. If we assume an average premium of £10 per cent upon the schemes then in the market, the property temporarily created by these speculations (and the repeated purchase and sale of which, on commission, furnished profitable employment to some thousands of brokers) must have been at least £50,000,000.

"And to this there is to be added an increased value, during the same period, of the shares in the established lines of railway. For instance :

"The Midland stock—amount £4,180,000 —was selling in January 1845 at 114 per cent, and in July at 188 per cent ; showing a rise of 74 per cent, and an increase in the aggregate value of the stock of £3,098,000.

"The Great Western—share capital issued £8,100,000—£100 shares selling in January 1845 at £156 ; and in July at £228 ; and (allowing for a call at £5 per share in the interim), showing a rise of 67 per cent, and an increase in the aggregate value of the shares of £5,467,000.

"The Manchester and Leeds—share capital £4,660,000—£100 shares selling in January 1845 at £126 ; and in August at £215 ; showing a rise of 89 per cent, and an increased value in the aggregate of £4,147,000.

"The average increase in the value of £100 shares in these three lines was £76 ; and the total increase of value in August and September was upwards of £12,000,000."

Mr. Dawson continues: "It will be seen, on reference to the tables, that during those months in which the purchases and sales of railway property were most numerous and extensive, while everybody was buying and selling shares, and the current rate of interest was only 2½ per cent, that portion of the circulating medium which consisted of Bank of England notes was but very slightly, if at all, increased ; and that it reached its greatest amount when the prices of shares were lowest—when the number and amount of current transactions were reduced to the lowest point by discredit, and when the current rate of interest for first-class bills had risen from 2½ to 4½ per cent."

These last remarks of Mr. Dawson's refer to an important point connected with this crisis—the first authoritative suspension of the bank act of 1844, and also, incidentally, to the question of the connection between the circulation of notes and periods of commercial crisis. Reference will be made to this further on. Meanwhile other complications occurred.

The failure of the potato crop in 1846 caused the need for a heavy importation of corn. "The price of corn was very high in 1847, the average in May being 92s. 10d. per quarter, but the imports rose in proportion. In the three years from 1845 to 1847 they were as follows :

	1845	1846	1847
	Cwts.	Cwts.	Cwts.
Wheat	3,777,140	6,207,894	11,511,305
Wheatmeal and Flour	945,864	3,190,429	6,329,058
Maize.....	241,667	3,024,883	15,464,194

The corn merchants, who for some time had great difficulty in obtaining advances upon cargoes in consequence of the high rate of discount, lost immense sums from the great fall in prices which took place, owing to the prospect of an abundant harvest. And the result was the failure of many houses in the corn trade, which became the signal for other heavy bankruptcies. Several banks succumbed, and credit was severely shaken" (L. Levi, *History of British Commerce*, p. 310).

The fluctuations in the rate charged by the bank were very considerable, and were the more noticed at the time as nothing exactly similar had ever occurred before.

On 1st January 1847 the notice of 27th August 1846, fixing the minimum rate at 3 per cent per annum on 95 days bills, was still in force.

1847.	Per cent.	
14th Jan.	3½	minimum on 95 days bills.
21st ,,	4	,,
8th April	5	,,
15th ,,	5	omitting all stipulation as to the term of the paper.
2nd Aug.	5	on 1 month bills ; 5½ on 2 months ; 6 per cent above 2 months.
5th ,,	5½	minimum rate.
2nd Sept.	5	on loans till 14th Oct.
23rd ,,	5½	on 2 months bills ; 6 per cent on 3 months.
1st Oct.	5½	on everything falling due before 14th Oct., and total refusal to advance on public securities.
25th ,,	8	minimum rate under authority of the government letter of this date.
22nd Nov.	7	minimum rate.
2nd Dec.	6	,,
23rd ,,	5	,,
1848.		
27th Jan.	4	,,

The announcement of 1st October that no advances would be made on public securities produced (see *Economist*, 9th October 1847) a severe panic on the stock exchange. There was no failure of a bank, however, except that of Cockburns and Co. of Whitehall, till 13th October, when Knapp and Co. of Abingdon suspended payment. On 18th October the Royal Bank of Liverpool stopped ; before 23rd October other important banking failures took place at Liverpool, Manchester, Newcastle, and in the West of England. 3 per cent consols, which had stood at 84½ on 5th October, were

by this time 77¾, the lowest point, and a total suspension of all business and all payments was imminent. The reserve of the bank was reduced to a very low ebb.

1847.	Reserve of Specie.
16th Oct. . . .	£3,070,000
23rd ,, . . .	1,990,000
30th ,, . . .	1,600,000

Meanwhile the anxiety and alarm prevailing were causing a general hoarding of coin and bank notes, and it really appeared not unlikely that the banking department of the Bank of England might be compelled to stop payment while there was more than £6,000,000 of specie in the issue department. The chancellor of the exchequer (Sir C. Wood, afterwards Lord Halifax) was urged by many deputations and remonstrances to relax the bank act, but he declined. At last, on 22nd or 23rd October, some of the leading city bankers had an interview with the prime minister (Lord John, afterwards Earl Russell), and on their explaining the necessities of the position, the desired relaxation was given. The official letter (25th October) recommended "the directors of the Bank of England, in the present emergency, to enlarge the amount of their discounts and advances, upon approved security." A high rate, 8 per cent, was to be charged, to keep these operations within reasonable limits; a bill of indemnity was promised if the arrangement led to a breach of the law. The extra profit derived was to be for the benefit of the public. No really adequate reason has ever been given for this last stipulation, unless it is supposed to have been made to prevent the bank from maintaining the extra rate unduly long.

The effect of the government letter in allaying the panic was complete. When anxiety as to obtaining bank notes or gold was removed, the immediate pressure shortly disappeared. Speaking in the House of Commons, during the debate of 30th November on this subject, the chancellor of the exchequer (Sir C. Wood) stated that the tenor of the remarks made by those who applied to him was "Let us have notes" . . . "We don't mean indeed to take the notes, because we shall not want them; only tell us that we can get them, and this will at once restore confidence."

The space which can be allowed here to this subject does not permit further details being given. It should be observed that the earlier crises than the last one mentioned here, that of 1847, were all so greatly influenced by the highly artificial condition both of trade and credit, caused by the terrible wars of the commencement of the century, that the lessons to be drawn from them are, comparatively speaking, inapplicable to the business circumstances of the present time. The commercial histories of that period, including the admirable one contained in Tooke and Newmarch's *History of Prices*, are full of remarks on the questions how far the crises were brought on, or increased in severity, by the issues of notes made by the country bankers at that period. That those banks employed their own credit frequently unwisely there is no doubt, and equally that they frequently gave credit unwisely to traders on inadequate security. Notes were at that date the recognised medium in which advances were made; and that there was by all banks, including the Bank of England, at times an over-issue of the circulating medium may be conceded. It is, however, matter for fair discussion whether any statesman nowadays would have arranged the bank act of 1844 on the principles of Peel, or whether it is advisable to concentrate the whole of the issues on one bank, however powerful and well-organised.

Commercial crises may take place without any reference to the circulating medium, as has been exemplified in Hamburg and elsewhere. They can only be averted or mitigated by the judgment of those with whom the guidance of commercial affairs and of the banking institutions of the country rests at the time.

[The periodicity of crises has frequently been noticed. Mr. Wm. Langton, in his paper "Observations on a Table showing the Balance of Account between the Mercantile Public and the Bank of England," *Transactions of Manchester Statistical Society*, 1857-58 (reprinted also in the *Transactions*, 1875-76, Appendix), has made valuable remarks on the subject.—Mr. John Mills ("Paper on Credit Cycles," *Transactions of the Manchester Statistical Society*, 1867-68), has shown the connection between these periods and the variations of personal feeling.—Also paper by H. Chubb (*Statistical Society Journal*, June 1872), "Bank Act and Crisis of 1866.—Prof. Jevons (*Investigations in Currency and Finance*, pp. 153, 203-8), has shown, with his customary ingenuity of research, that the period of credit cycles and of the solar cycles of maximum intensity correspond with considerable exactness. The frequent recurrence of periods of excitement and depression in monetary and commercial matters is likewise referred to by Mr. James Wilson, *Fluctuations of Currency, Commerce, and Manufacture, referable to the Corn Laws.* We must be careful not to yield to the belief that *post hoc* is identical with *propter hoc* in these matters; but this subject is eminently one in which careful historical investigation may be expected to produce useful and practical results. See also F. Lavington, *The Trade Cycle* (London, 1922). For earlier history, Macpherson, *Annals of Commerce* (4 vols. London, 1805).—Anderson, *Origin of Commerce* (4 vols. London, 1801).—*Select Tracts on Commerce and Early Tracts on Commerce*, reprinted and edited by J. R. M'Culloch, 1856-1859.—Max Wirth, *Geschichte der Handelskrisen*, Frankfurt am Main, 1891.—D. Morier Evans, *Commercial Crisis*, 1847-1848 (published 1848).—D. Morier Evans, *Commercial Crisis*, 1857-58 (published 1859).—C. Juglar, *Des Crises Commerciales*, Paris, 1889.]

CRISES, 1857-1866-1890. The early panics of the last century having been described above, our attention will be confined here particularly to the events of 1857, 1866, and 1890.

One of the most remarkable and instructive facts is negative, viz. that there has been really no panic in England since 1866. The difference between the events of that year and what occurred in 1890 will be explained later on. It was formerly regarded as almost a law of nature that a crisis should arise every ten years or thereabouts, and the years 1825, '37, '47, '57, and '66 confirmed this impression. But since the last date, with the exception of some alarm in 1878 (when the City of Glasgow and the West of England Banks collapsed under circumstances calculated to cause such disquietude as would in former times have caused alarm if not panic), though there have been many changes in business, and a huge development of trade, we had no crisis until November 1890. This last crisis differed much from previous disturbances of credit. In former times alarm was diffused over the whole kingdom ; London was drained of its reserves to fill up the wants of the country, and the imprudences of banks having caused or aggravated alarms, there was a general uneasiness in the banking world and a consequent increased holding of cash, and an indisposition to grant assistance to the trading world. But, on this last occasion there was no general alarm in the country. Banks outside London were hardly sensible of the crisis, and even in London there was no panic except in Capel Court. No bank failed in town or country, and no suspicion of danger to banks seems to have existed amongst their customers. Some great issuing houses lost their position, and narrowly escaped suspension. Enormous losses fell on the public, but not on banks, except indirectly. It was not a panic as involving general alarm amongst the public, but a crisis in special directions, which might easily have extended, so as to have caused such a panic as never yet has occurred in any country. The danger was prodigious, but it was averted.

In former crises the danger was not averted, and things were allowed to drift, so that great houses and banks failed, and general alarm ensued. In this case, no great house suspended, though Barings, one of the greatest of all, went into liquidation. Instead of a huge lock up of mercantile capital in unpaid documents, business was carried on without any serious inconvenience to any one ; and it may be fairly said that, for all practical purposes, nothing was known of the crisis in the country at large, until all was over.

In some respects all crises are alike, inasmuch as all such events arise from what is called an "abuse of credit." But that abuse may take various forms. Sometimes the vagaries of banks in lending enormous sums without any security that can be realised, have caused the trouble. At other times, as for instance in the case just referred to, great investments by the public in stocks which are worthless, or much depreciated, have had a similar effect in arousing exaggerated alarms. The causes varying, the results also vary much.

Of course, if the errors of banks start the anxiety, it is natural that other banks should feel the effects more than merchants who have nothing to do with the matter, except that they suffer for the mistakes of others. If, on the other hand, as in 1890, mercantile imprudence originated the mischief, then, most naturally, mercantile credit is affected more than that of banks, who may suffer, but not deservedly.

A glance at the peculiar features of the several crises above mentioned will illustrate what has been here stated, and will bring out more clearly those resemblances and differences which tend to throw light on the whole subject.

It is not very easy to define how far credit may extend safely, but it is very clear that during the years 1855 and 1856 the extension of credit was enormous and dangerous. It has been sometimes asserted, though there is no way of testing the truth of the assertion, that during the years in question there were as many bills offered for discount in Lombard Street as there are now, though the real volume of trade has vastly increased since 1857, the total of the imports and exports being unitedly £311,764,000 in 1856, and £748,944,000 in 1890. In those times it was a common thing for banks in manufacturing districts to send great masses of bills to London for rediscount, *i.e.* bills taken by the banks, but which they were unable to hold to maturity from their own resources. The amount of this business in 1856 and 1857 was enormous, and even after the panic of that year, when many bills came to an end by failures of traders and of bankers, the amount of rediscounts by banks continued to be very large. But, at this moment, that business has almost come to an end. It was much reduced after 1866, and it is now confined within narrow and perfectly legitimate limits. In fact most of the banks which in 1857 were borrowers in London are now large depositors there.

Those who are too young to remember 1857 would not find it easy to imagine the condition of things which then existed. The reserve of the Bank of England may be said to have been continually at danger point (the amounts in the autumn of 1857 are given in the table that follows), although the daily transactions in Lombard Street were large and important. The demands were often heavy, as we have said, but the reserve was miserably small. It was a common thing for the largest operators in bills to keep practically no reserve whatever,

and to depend on application to the Bank of England for the supply of their wants. The average rate of interest paid on loans and discounts was very high, and though it is true that no prudent trader was ever killed by interest paid on borrowed money, it is clear that in a condition of things when traders generally were large borrowers, the existence of a very high rate of discount was one of those circumstances which combined to create an electrical and excitable condition in men's minds, so that alarm and panic were very liable to supervene.

The immediate cause of panic is of course the fear on the part of borrowers that they will not be able to secure what they need, accompanied by a fear on the part of lenders of giving what, in ordinary times, they would grant with pleasure. This fear arises in different ways on different occasions. It may be caused by heavy failures making even the solvent anxious as to their future, for all traders have payments for which they must provide. Or it may arise from the condition of the Bank of England, as her accounts are periodically published, and are supposed to tell all the world what may be expected as to borrowing and lending. However small may be the reserve kept by other operators, "the Bank" is expected to be ready for every emergency, and if her reserve should be depleted, every one gets alarmed and desires to provide without delay against a very uncertain future. So it comes about that adverse exchanges combine with internal alarms to reduce the surplus notes of the bank, and this condition adds to the demands upon her just when she is least able to meet them. Under our system, however great the pressure, she cannot take a sovereign from her issue department. The gold held there is as sacred as if deposited at Westminster in the custody of the government. The Bank, therefore, raises the rate of interest, so as if possible to attract gold from other countries. That movement cannot operate at once, but the fact of her taking such action is quickly effective in increasing alarms outside. Demands increase still more, so that the Bank has recourse to restrictions in one form or another—restrictions which only aggravate panic, until at last the Bank must either collapse as a bank, and cease to make advances, or must obtain extraordinary powers, so that she may allay alarm by a greater freedom in her operations.

So marked has been the influence of these considerations during recent panics, that some writers have been disposed to attribute our present liability to these alarms to the change made in our currency laws in 1844, when the two departments of the Bank were separated, and the old elasticity of the issues of the bank was replaced by a hard and fast limit dependent on supplies of bullion. But the answer to this suggestion is very simple, viz. that our panics before 1844 were probably far more severe than those which have occurred since, and that for forty-six years since 1866, with the same law, we have had no proper panic. In 1837 the Bank was very nearly denuded of gold, her issue of notes not being restricted, whereas since 1844 she has never been deprived of a large reserve in the issue department, a reserve not available without special authority from government, but still a reserve which is available, and has been found ample for every emergency of modern times. Alike in 1847, 1857, and 1866, a letter from the chancellor dissipated the panic as by the wand of a magician. Once remove the fear of a complete break-down, and panic passes away far more quickly than it arose. It is astonishing how soon all real alarm disappears, and business resumes an ordinary course. High rates of discount may prevail for some time, but, sooner or later, they too disappear, and "confidence is restored," until a renewal of commercial blunders or follies brings about a renewal of discredit and consequent alarm.

The following table shows the rapid change which arises as soon as the panic has subsided:—

000 omitted in cols. 2 and 3. Figures from nearest return.

1 Year and Month.	2 Gold Bullion in Bank.	3 Reserve of Notes.	4 Rate of Discount per cent.
September 4, 1847	£7,374	£4190	5½
October 2, „	7,117	3409	6
November 6, „	7,248	2030	8
December 4, „	9,111	5583	6
January 1, 1848	10,444	7866	5
September 5, 1857	10,836	6065	5½
October 3, „	10,078	4606	5½
November 4, „	7,947	2155	8
„ 11, „	6,666	957	10
„ 18, „	6,079	1148[1]	10
„ 25, „	6,784	1918	10
December 2, „	6,896	2268	10
January 6, 1858	12,113	7089	8
March 7, 1866	13,151	7416	7
April 4, „	13,486	6153	6
May 2, „	12,712	4839	6
June 6, „	12,620	2167	10
July 4, „	14,148	3336	10
August 1, „	12,932	2412	10[2]

1 £2,000,000 was, under authority of Treasury letter, 12th November 1857, added to the securities in the issue department, in the returns from 18th November to 23rd December 1857, both inclusive. The strict limits of the Act of 1844 were only exceeded in the returns of 18th and 25th November 1857. They were not exceeded in 1847 and in 1866. Tradition, founded on a statement made by the late Mr. William Newmarch, reports that they would have been exceeded in 1866 had not the banks in the city repaid to the Bank of England every evening, during the worst of the crisis, the notes which they had drawn out in the day.

2 Reduced to 8 per cent 16th August.

So far the features of both the panics now under consideration are very similar. The difference is more one of detail than of principle. In both there was the high rate of discount following adverse exchanges, and great demands for accommodation by traders. In both there was the depletion, more or less rapid, of the bank reserve, and finally the heavy failures and the consequent alarms, ending in a sort of "stampede" or "sauve qui peut," if one may use such expressions in this place. In neither case did a single solvent firm succumb, though in both cases, and especially in 1857, more than one solvent house escaped as by a sort of miracle.

Of course the panic of 1866 was marked by the great failure of the almost historic house of Overend, Gurney, & Co., and by that memorable "Black Friday," when it seemed likely that confidence might be utterly lost, whereas in fact it was maintained in a truly astonishing way. Lombard Street was given over to an excited crowd who did not, however, withdraw their deposits, if they had any, and the day passed off with most trifling results as compared with the fears that pervaded the minds of many experienced persons. But the panic of 1857 was in one way more striking and more serious than that of 1866, inasmuch as it was as widespread in America as it was in the United Kingdom, and in fact began in New York. But these differences are not of first-rate importance. The grand distinction between the two panics is that already mentioned, viz. that in the former no warning was taken, and the panic was followed in a few years by another equally severe, while, in the latter case, the lesson seemed to have been taken to heart, the excessive credit was cut down, and the era of panics seemed to have passed away. Why this should be so is not very clear. Some say that the disappearance of Overend, Gurney, & Co., and their friends is one great cause of the change. Without refusing to give some weight to this fact, it is difficult to suppose that this can be the only cause of so remarkable a contrast. It seems more rational to say that the tremendous lessons of 1857 and 1866 were not lost on the financial or the mercantile world, and that, as a result, credit has been maintained on a far sounder footing than in former years.

This confidence in our present position was, it is true, somewhat rudely shaken during the year 1890. As already stated, although we were not visited by an old-fashioned panic, the events of 1890 bore no small resemblance to those of former years, and, but for much judgment and skill displayed by the directors of the Bank of England, the crisis of 1890 might have easily ended in failures and panic far more serious than those of any former years. It is probably quite true that the tremendous lessons of 1857 and 1866 were not lost on the financial or the mercantile world, and that credit was maintained on a comparatively sound footing for many years. There has been abundance of enterprise since 1866, but those who have been familiar with the money market for thirty years will, we think, agree that a much larger proportion of business is now transacted on a cash basis, and without recourse to credit, than was possible a quarter of a century ago. But though this is so, and, in ordinary business, there may be less danger of "abuse of credit" than there was when the country was much less "capitalised" than it now is, the very abundance of means may have given rise to an inclination towards excessive confidence, as if the capital available for loans of all kinds had no limit. This feeling may also have been intensified by the great accumulation of capital in the hands of "trusts" or "investment companies" eager for profit, and not always so much alive as are individuals to the danger of great mistakes.

But, probably, the most important distinction which marked the position of 1890 as compared with 1857 and 1866 will be found in the condition of the Bank of England. When alarm began at the latter end of October 1857, the reserve of the Bank was under £5,000,000, and at the end of April 1866 it was under £6,000,000. In one day in 1866 £4,000,000 left the bank in notes and coin, in consequence of the failure of Overend, Gurney, & Co. Such a position was dangerous, and the publication of such returns, combined with the raising of the rate of discount to nine and ten per cent, was sure to aggravate alarms. But in 1890 the reserve stood at £14,500,000 when it became known that the great house of Baring had gone into liquidation, and that its liabilities would be paid by the Bank. The position of the Bank being so strong, and it being known or rumoured that the action of the Bank was approved and supported by the government, panic did not arise, except as to the price of securities directly affected by this great failure, or by failures in America, and no mercantile disaster of the least consequence occurred, nor was the rate of interest charged on discounts excessive. In fact, there was no general discredit. Of course there was uneasiness, it being known that other houses must have lost heavily through South American complications, but banking and other business went on as usual, and prices of produce were not seriously affected.

There were none of the usual symptoms of panic, except in the Stock Exchange, and the contrast to those who had lived through 1857 and 1866 was very remarkable. In those years people feared that the Bank would be unable, without an increased power of issue, to deal with the emergency, and it was never absolutely certain when, if at all, the government would come to the aid of the Bank. In 1890, thanks

to the forethought of the Bank in providing herself with an addition to her bullion by a loan, her position was so strong at the critical moment as to prevent the occurrence of any general alarm. Men did not rush to supply themselves with money one day, in fear that they might find it difficult to procure it on the following day, but attended to their businesses without excessive anxiety as to the supplies of capital. Caution prevailed, but not panic, and the distinction is a very clear one.[1]

For the crisis of 1914 see DRAIN OF BULLION, Appendix.

It has been already pointed out that trading people soon recover their spirits and their confidence when the panic is once well over. Prices which, before and during panics, have been in some instances severely depressed, quickly rise to their former level, and men cease to consider the money market in their dealings, being no longer afraid of monetary trouble as to the discount of bills, or otherwise. The statistics of our trade seem to confirm this view. Spite of panics, our aggregate trade has gone on increasing, with fluctuations no doubt, but not with fluctuations which seem to point to panic as the great disturber of our commerce. We have had divers "depressions" in trade, often very difficult to account for, and they are generally followed by improvement and even speculation, often little expected, and arising no one knows why. But certainly, in recent years, neither depressions nor elevations can be traced to the effects of panic. Vast changes have taken place, thanks to "many inventions," and prices have fluctuated beyond all precedent without any very marked oscillations in credit. The supply of loanable capital since 1866 has been, on an average of years, ample, and this has no doubt lessened the tendency to panic amongst traders generally. But there have been these great fluctuations although the money market has been so stable, and this recent experience tends to confirm the opinion that we should not attribute much permanent effect to the panics of former periods. No one is likely to forget the temporary effects of a panic if he has lived through one, but, as to permanent results, panics are probably not important.

But panics in the United States have been very severe. The sharpest were in 1837, 1857, 1873, 1893 and 1907. The closing months of 1907 were marked by an outburst of widespread and unreasoning alarm, and by the suspension of cash payments by many of the 16,000 banks of the country. Cash could not be obtained, and the use of an emergency currency of cheques guaranteed by the Clearing Houses, estimated at upwards of £100,000,000, was required. The crisis began in New York connected with two of the National Banks and continued with two of the Trust companies. (*Econ. Journ.*, London, 1908, "The American Crisis of 1907"; *Quart. Journ. of Econ.*, U.S.A., 1908, "Hoarding in the Panic of 1907.")

It is interesting to observe that countries where panics are rare, as France and Germany, do not appear to make greater commercial progress than England and the States, where panics have been, comparatively, not infrequent.

In fact, in countries of great enterprise, and where credit attains a great development, it is obvious that there must be a danger of undue expansion followed by excessive alarms. Such people use up their means too closely, no doubt, but, on the other hand, they do far more business and acquire far larger profits from their enterprise than can be secured by people who are no doubt more prudent, but are less energetic. The very prudent nations escape panic, but they at the same time must accept a smaller return on their capital. They no doubt keep larger reserves than less cautious traders, but such reserves are expensive to maintain, and it may be well doubted whether in the long run more is not gained by the more enterprising peoples, even though they may subject themselves to occasional alarms of a serious and painful nature.

The general result seems to be that, however remarkable the phenomena of crises may be, they are not of great permanent importance, nor are they to be regarded as an inevitable consequence of an active and enterprising conduct of business. They are really spasmodic symptoms, and not symptoms of any serious and continuous disease which has to be brought under some legislative remedy. They illustrate the results of a temporary suspension of the laws which regulate the ordinary currency of a nation when confidence between man and man is lost, but events so exceptional defy regulation, and the cure for such evils will probably be found rather in the practical good sense of men of business than in any expedients invented by ingenious law makers.

It has, however, been suggested that some kinds of legislation may aggravate panic; as, for instance, the law of the United States of

[1] The contrast of the three great crises with reference to the reserves of the bank in its banking department, is shown by the following Table.

Notes in reserve in the Banking Department of the Bank of England.

1857.	£	1866.	£	1890.	£
Oct. 3	4,606,000	April 11	6,317,000	Oct. 15	10,275,000
,, 10	4,024,000	,, 25	5,844,000	,, 29	10,660,000
,, 17	3,217,000	May 9	4,950,000	Nov. 12	10,024,000
,, 24	3,485,000	,, 16	730,000	,, 19	13,378,000
,, 31	2,258,000	,, 23	830,000	,, 26	15,309,000
Nov. 4	2,155,000	,, 30	415,000	Dec. 10	15,904,000
,, 11	957,000	June 6	2,167,000	,, 17	15,797,000
,, 18	1,148,000	,, 20	4,067,000	,, 24	14,205,000
,, 25	1,918,000	July 4	3,335,000		
Dec. 2	2,268,000	,, 18	2,498,000		
,, 9	3,900,000	Aug. 1	2,412,000		
,, 16	5,757,000	,, 15	3,611,000		
,, 23	7,426,000	,, 29	5,833,000		

[For returns from 18th November to 23rd December 1857, see note 1, p. 463.]

America as to bank reserves, and our own law as to the issues of the Bank of England. We certainly think that the experiences of 1847, 1857 and 1866 (to say nothing of 1890), show that such a law as ours, which gives no power of expansion to the bank, as such, no matter how grave may be the emergency, is one of very doubtful wisdom. It would, we believe, be far more reasonable to adopt something like the plan adopted by the German Bank law of 1875, whereby the bank can issue beyond the usual limit on paying at the rate of 5 per cent per annum to the government on all extraordinary issue, as a sort of penalty—an arrangement which ensures a reasonable charge to the public on such extra issues, and thus compels contraction of obligations by a sort of automatic process. Panic is thus avoided, while a wholesome warning is extended to the trading world, and the money market is brought under the rule of law, and is not, as with us, dependent in the worst times on the caprice of a Chancellor of the Exchequer, who may be a man ignorant of the dangers and difficulties of commerce, or who only knows them vaguely, as set forth in the books of mere theorists. W. F.

CRISES, Periodicity of. In the world of physics the idea of "periodicity" of "cycles" is familiar. The twenty-eight years period of the sun is a simple illustration of a regular cycle.

The recurrence of commercial crises over a century, at intervals of ten or twelve years, has been frequently noticed by economists, and the suggestion made that possibly the physical law which, every ten or eleven years, brings good vintage years to Europe and droughts to India, may control the commercial fortunes of men. An enumeration of recorded years of acute commercial distress—1753, 1763, 1772-73, 1783, 1793, 1815, 1825, 1836-39, 1847, 1857, 1866, 1878, 1890—suggests periodicity. During these 140 years trade and banking have been carried on in war and peace, with a silver standard, with a gold standard, under a suspension of cash payments, in times of plenty, and in times of want; but the fatal years have come round with a considerable approach to cyclical regularity. While admitting that the commercial crises to which this generation has been exposed have been less acute than those which afflicted the close of the 18th and the beginning of the 19th century, the fact of their recurrence in something like periodicity remains—a fact which it is easier to record than to explain. Space only permits a statement of some of the more important crises, with a reference to works from which fuller information may be derived.

To commence with the beginning of this century, the question of the periodicity of cycles is discussed by Henry Thornton, whose well-known sagacity caused him to be greatly consulted on financial questions by William Pitt, in his work, *An Enquiry into the Effects of the Paper Credit of Great Britain*, 1802. Thornton speaks of the crisis of 1793 as the first material one of the kind which had for a long time happened. He points out that the panic greatly abated, and mercantile credit began to be restored, so soon as the *intention* to issue exchequer bills was announced. He also mentions as worthy of notice that, though the failures had originated in an extraordinary demand for gold, it was not any supply of gold which effected the cure, but the idea of general solvency which was created by the promised issue of exchequer bills (pp. 49-51). He further mentions (p. 152) that the fluctuation in the balance of trade with foreign countries which we experience had also become larger than heretofore, in consequence of the greater extent of our population and commerce. "The scale of all things having increased, the scale of this balance may have increased also in a degree unexpected by the bank."

Tooke, in his *History of Prices*, vol. i. p. 176, gives a clear account of the progress of events leading up to the disasters of 1793. Tooke states that immediately preceding that crisis a great revulsion and derangement of commercial credit had occurred, due to a pre-existing and undue extension of credit and paper circulation.

In vol. ii. p. 5, in discussing the causes which led to the discredit of 1816, he explains that the speculation in exported commodities, which had its first rise in the prospect of the downfall of the power of Napoleon I. in Europe, reached its height in the spring of 1814, and that the tardy discovery that the effective demand of the continent had been over-rated precipitated the crisis of 1815-16.

The causes of the crisis of 1825 are discussed by Tooke (vol. ii. pp. 149-159). In 1822, the British 5 per cent had been reduced to 4 per cent; this had led to a general restlessness among those whose incomes were reduced, and a readiness to invest in foreign loans, the principal borrowing states being South American. The South American loans ultimately entailed a loss of nearly the whole of the sums subscribed. The exaggerated views of coming prosperity allowed full scope for an undue enlargement and abuse of credit.

The panic of 1836 is fully described by Tooke (vol. ii. p. 274). It is noticeable that whereas the disasters in 1825 were principally due to foreign speculations, those of 1835 were due to home speculations, an undue extension of credit arising from gambling in shares of railways, joint-stock banks, etc.

In vol. iv., speaking of the crisis of 1847, Tooke says: "In August 1845 the speculation assumed all the apparent characteristics of a mania. Symptoms of an approaching revulsion were, however, then clearly discernible."

It is noteworthy that the gradual develop-

ment and overgrowth of credit indicated by Langton, Jevons, and Mills, are clearly stated by Tooke.

A variety of causes brought about the serious crash in 1847—railway calls in excess of the means of the country, high price of corn, etc.; but the evidence of a culmination of previously developing causes is as clear on this occasion as on the others which have preceded and followed that date.

Mr. William Langton, of Manchester, speaking of periodicity says (*Transactions of the Manchester Statistical Society*, December 1857): "These disturbances are the accompaniment of another wave which appears to have a *decennial period*, and in the generation of which moral causes have no doubt an important part. The prompting cause of these convulsive movements appears to lie in the inordinate use of credit."

The doctrine of periodicity was held strongly by Professor Jevons, who carried his investigations into the subject over a great length of time, and with his noted ability. In a communication on the study of periodic fluctuations, British Association 1862 (Cambridge), Jevons says, "There is a periodic tendency to commercial distress and difficulty during these months (October and November). It is when great irregular fluctuations aggravate this distress, as in the years 1836-39, 1847, 1857, that disastrous breaches of commercial credit occur." In elucidation of Jevons's allusion to "great irregular fluctuations," a quotation from his paper on "The frequent pressure in the money market," *Journal of the Statistical Society of London*, 1866, vol. xxix. p. 235, may be useful. "These changes arise from deficient or excessive harvests, from sudden changes of supply or demand in any of our great staple articles, from periods of excessive investment or speculation, from wars and political disturbances, or other fortuitous occurrences which we cannot calculate upon, and allow for." Still further developing the notion of periodicity, Jevons (*Political Economy*, 1878, Science Primers) says, "Good vintage years on the continent of Europe, and drougnts in India, recur every ten or eleven years, and it seems probable that commercial crises are connected with a periodic variation of weather affecting all parts of the earth, and probably arising from increased waves of heat received from the sun at average intervals of ten years and a fraction."

The influence of solar radiation, and the possibility of a relation between the sun-spot period and the price of corn and other events, formed a subject of inquiry suited to the exact and scientific mind of Jevons. For this the reader may be referred to his *Investigations in Currency and Finance*, in which his detached papers are collected, and *Letters and Journal of W. S. Jevons*.

The invention of the term "credit cycle" may be traced to Mr. John Mills of Manchester (Paper on "Credit Cycles and the Origin of Commercial Panics," *Transactions of the Manchester Statistical Society*, December 1867). Mr. Mills discussed the pathology of crises; and after alluding to "the occult forces which swell or diminish the volume of transactions through a procession of years," thus spoke of periodicity. "It is an unquestionable fact that about every ten years there occurs a vast and sudden increase of demand in the loan market followed by a great revulsion and a temporary destruction of credit.

"The periodicity of commercial crises is at any rate a *fact*. The decades interposed between the great commercial crises are normal cycles of development of credit under certain existing conditions; that during each of these decades commercial credit runs through the mutations of a life, having its infancy, growth to maturity, diseased overgrowth, and death by collapse."

Mr. Mills enters into a minute examination of the life-history of a credit cycle in a communication made to the Manchester Statistical Society, *Transactions* 1871. Four years earlier, in his paper read before the Manchester Statistical Society in 1867, Mr. Mills had discussed the possibility of finding remedies for the periodic recurrence of commercial panics, in seeking for which he laid stress on the increased spread of information. Mr. Mills's anticipation appears to have been verified in some measure by the course of events.

[Max Wirth, *Geschichte der Handelskrisen*, 1883.—Clément Juglar, *Des Crises Commerciales et de leur retour périodique en France, en Angleterre, et aux États-Unis*, 1889.] G. H. P.

CROMBIE, Alexander (1762-1842), born at Aberdeen, was for some time Presbyterian minister, and then schoolmaster, in London. He was known for his writings on etymology and syntax, especially for his *Gymnasium*, a book of exercises in Latin composition; but he wrote also on theology, philosophy, and political economy. Apart from his books, he seems to have had a wide personal influence. Major Torrens dedicated to Dr. Crombie his *Essay on Money and Paper Currency* (1812), and speaks of him with great deference in the *Essay on the External Corn Trade* (1815). In 1813 Crombie published, in the *Pamphleteer* (vol. x.) a *Letter to David Ricardo containing an analysis of his pamphlet on the Depreciation of Bank Notes*; but Ricardo did not regard him as a perfectly faithful exponent of his views. Crombie's *Letters on the Agricultural Interest* (1816) would seem to have been the last of his economical writings.

[Ricardo's letters to Malthus, 1887, Clar. Press, p. 82, *sub dato* 21st April 1815.] J. B.

CROME, August Friedrich Wilhelm (1753-1833), a distinguished German statisti-

cian and economist, was born at Sengwarden, in the territory of Kniphausen. He studied theology at Halle, and was for some time instructor of the hereditary prince of Dessau. From 1787 to 1831, he filled the chair of statistics and cameral science at Giessen. He is called by Roscher the "Haupt-theoretiker des Rheinbundes," having persistently defended that confederation, and maintained it to be "a liberation for Germany, alike beneficent to rulers and to the people." He expected that under its influence a better national economy would be introduced, founded on the principles of Adam Smith, "as improved by Soden, Hufeland and Jakob." In *Deutschland's Krise und Errettung im April und Mai* 1813, which appeared immediately after the battle of Lützen, just when the national rising against Napoleon was coming to a head, he attempted to show by statistical reasonings the madness of opposing the "great hero," as certain to lead to the ruin of the fatherland. This publication raised a storm which was only partially appeased by his treatise *Ueber Deutschland's und Europa's Staats- und National- Interesse bei und nach dem Congresse zu Wien*, 1814. His other principal works were, *Europa's Produkte*, 1782; *Grösse und Bevölkerung der Europ. Staaten*, 1785; *Ueber die Culturverhältnisse der Europ. Staaten*, 1792; and *Geographische Statistische Darstellung der Staatskräfte von den sämmtlichen zu dem deutschen Staatenbunde gehörigen Ländern*, 1820-1828. He translated into German (1795) the treatise entitled *Governo della Toscana sotto il regno di Leopoldo II.*, 1790, which was the work of that prince himself. Crome undertook the translation by Leopold's desire, and, in the comments which he added, he appears as an advocate of an enlightened and reforming absolutism, such as that of which the book is a history. He was also author of an autobiography. (See Roscher, *Geschichte der National-Oekon. in Deutschland*, p. 649). J. K. I.

CROSS DRAWING. Another term for the making of an ACCOMMODATION BILL (*q.v.*) When such an instrument has been wilfully put into circulation by a fraudulent trader, as if founded on a real transaction, the nicest penetration and judgment of experienced business men, such as bill-brokers and bankers, will sometimes be put to the test to discover the true origin and character of the instrument. Bills of this description are sometimes termed "Wind Bills," or "Kites," from their want of substantial basis.

[Hutchison, *The Practice of Banking*, vol. i. p. 125.]

CROSSED CHEQUE. The crossing of cheques is now regulated by §§ 76 to 82 of the Bills of Exchange Act 1882 (see CHEQUES, LAW OF) and the Bills of Exchange (Crossed Cheques) Act 1906 (see BILLS OF EXCHANGE ACT 1882, App.).

CROWN DEBTS. Debts due from a subject to the crown have priority over all other debts, and may be recovered by the summary process known as an *extent*. Every person who has money belonging to the crown is a crown debtor. Formerly, in order to enjoy priority, a crown debt required to be a debt of record or to be secured by deed, but since the 32 & 33 Vict. c. 46, which abolished the priority of specialty debts, any crown debt takes priority to all others. Crown debts do not affect land until a writ of execution has been issued and registered.

[Elphinstone and Clark's *Law of Judgments and Searches*, London, 1887.—*Prerogatives of the Crown*, by J. Chitty, London, 1820.]

J. E. C. M.

CROWN (ENGLISH). *Gold coin* (Henry VIII. to Charles II.)

Reign.	Year.	Rating.	Weight.	Fineness.	Value in gold 916·6 fine, at £3 : 17 : 10½ an oz.
			gr.		
Henry VIII.	1527	5/	57·25	916·6	9/3½
Edward VI.	1549	5/	42·25	833·3	6/2⅔
James I.	1605	5/	38·725	916·6	6/3½
,,	1605 (Thistle Crown)	4/	31·00	,,	5/0½
,,	1612	5/6	38·725	,,	6/3½
,,	1612 (Thistle Crown)	4/4⅜	31·00	,,	5/0½
,,	1619	5/	38·725	,,	6/3½
Charles I.	1627	5/	35·12	,,	5/8½

Also double crowns (James I. to Charles II.) and half crowns in proportion.

Silver coin (Henry VIII. to present time).

Reign.	Year.	Rating.	Weight.	Fineness.	Value in silver 925 fine, at 5s. 6d. an oz.
			gr.		
Henry VIII.	1542 (as a kind of medal)	5/	480·00	925	5/6
Edward VI.	1551 (for circulation)	5/	480·00	,,	5/6
Elizabeth	1601	5/	464·50	,,	5/3⅜
George III.	1817 (and subsequently)	5/	436·36	,,	5/ or 5·81 fls.

Also half-crowns in proportion. A crown in white metal was struck in the reign of James I., but only a few were issued.

Crown (*Scandinavian*). The standard of value, but not a coin, 6·22278 grains of fine gold. Value, 1s. 1·215d., 1·389 franc.

Standard Gold Coins.

Denomination.	Weight.	Fineness.	Value in gold 916·6 fine at £3 : 17 : 10½ an oz.	Value in gold francs (900 fine).
	gr.		s. d.	francs.
Twenty crowns .	138·264	900	22 0½	27·78
Ten crowns .	69·132	900	11 0¼	13·89

Silver Token Coins.

Denomination.	Weight.	Fineness.	Value in silver 925 fine at 5s. 6d. an oz.	Value in standard silver francs (900 fine).
	gr.		s. d.	francs.
Double-crowns .	231·485	800	2 3½	2·67
Crowns . .	115·7425	800	1 1¾	1·33
Half-crowns (or 50 öre pieces) .	77·162	600	6¾	0·67
Forty öre . .	61·727	600	5¼	0·53
Twenty-five öre .	37·946	600	3¼	0·32
Ten öre . .	22·376	400	1¼	0·13

F. E. A.

CROWN LANDS. In Saxon times the king owned three kinds of property in land: (1) private estate which he could dispose of by will; (2) demesne lands that could be alienated only by consent of the witan; (3) certain rights over his folkland. The folkland tended to become merged in the royal demesne (Stubbs's *Constitutional History*, i. ch. vi. § 59; c. vii. § 75), a process that was completed by the Norman Conquest (*Ib.* ch. ix. § 95).

From Domesday we learn that the income from royal lands amounted to £20,000 (Pearson's *Early and Middle Ages*, i. 385). An important portion of the royal demesne consisted of forests which were exempt from the ordinary law, and subject to royal regulations of great severity (Pearson's *Hist. Maps*, pp. 44-48; Ellis's *Intr.* i. 103-116). The crown was supposed to defray the expenses of the household, of the administration of justice, and of the military forces. Though the crown revenue was greatly diminished by the loss of the French possessions, it was increased by marriages and by the dissolution of the monasteries. The alienation of the crown lands to favourites led to the attempts of the barons to limit the king's power of giving (Stubbs, ch. xvii. p. 284), and to the passing of various statutes with the same object.

By the 1 Anne, c. 1, §§ 5-8; 10 Geo. IV. c. 50, § 127; and 1 & 2 Vict. c. 2, §§ 1, 2, the right of alienation was limited to leases for lives or a term of years. By the last-mentioned act the crown surrendered its hereditary revenues (see Rogers's *Economic Interpretation of History*, Oxford, 1888, ch. xix.) The management of the crown lands is entrusted to the Commissioners of Woods, and is governed by a series of statutes enumerated in *The Chronological Table and Index of the Statutes*, 10th ed., London, 1887. See also *The Landed Interest*, ch. x., by J. Caird, London, 1878.

The crown, it is said (Chitty, *Prerogatives of the Crown*, ch. xi., London, 1820), is owner of the foreshore between high and low water mark in ordinary tides, unless a grant in private ownership can be proved, but Moore, in his *History of the Foreshore*, London, 1888, maintains that the theory of the crown's ownership of the *jus privatum* of the foreshore did not exist until the reign of Elizabeth, and that its origin is due to successful attempts to extend the prerogative. See also Hall's *Rights of the Crown* and the *Privileges of the Subject in the Seashore*, by R. L. Loveland, 2nd ed., London. Some writers also maintain that the crown owns all land under the marginal seas to the distance of a marine league, a view taken by a minority of the court in *R. v.* Keyn, L.R., 2 Ex., D. 63; but others deny such a right, conceding only a right of jurisdiction (see Hall's *International Law*, Oxford, 1880).

Forfeited estates formerly vested in the crown (see 33 & 34 Vict. c. 23), and the crown is owner of considerable private property in land. In theory, state lands in our colonies are vested in the crown, but control over them is vested in the colonial legislatures. All crown lands, including all private lands not disposed of, descend with the crown. J. E. C. M.

CRUMPE, Samuel (1766-1796), Irish physician, deserved the prize awarded by the Royal Irish Academy to his essay *On the best means of providing Employment for the People.* The causes of Irish distress are ably analysed. Among the remedies is a bounty on the exportation of corn (p. 241). The author is prepared to prohibit the export of wool (p. 303).

F. Y. E.

[Dr. Crumpe's prize essay is described as "an excellent treatise"; Malthus, *Essay on Population*, bk. iv. ch. xi. note.]

CRUSADE. A Portuguese gold coin, bearing the design of a cross. It was current in England in Queen Mary's reign, and was valued at 6s. 8d.

F. E. A.

CRUSADES, Economic Effects of. The crusades cover a long period of time, from the 11th to the 13th century, and their early triumphs were followed by complete and disastrous failure. This long duel between the west and the east, between Christianity and Islam, exercised the most profound influence upon Europe: upon the position of popes, emperors, and kings; upon the relations between church and state; upon the progress of literature, education, and art. To the crusades are due the breaking up of classes and the rise of nations. No less marked was their influence upon the economic conditions of mediæval Europe. The fall of the western empire and the triumph of the Teutonic invaders had resulted in the complete separation of the east from the west, and in the annihilation of that maritime commerce which had been first inaugurated by the Phœnicians and developed by the Greeks. So completely had naval enterprise been neglected that the early crusaders had no alternative but to march overland to Constantinople and to cross the Hellespont into Asia. The first result of the crusades was to revive maritime trade in those countries whose geographical position fitted them for this, especially in the Italian coast towns and such cities as Marseilles and Barcelona. By the 13th century the Mediterranean had become once more the centre of a world-embracing

commerce; from its shores the products of the east were carried overland to the centre of Europe, thence to England and even to the Baltic coasts. The route by the Caspian and southern Russia, through which a scanty trade between Asia and Europe had been conducted in the dark ages, was henceforth almost entirely neglected.

Next to the development of trade due to the crusading movements must be ranked the advance of industry. The products of the east had to be purchased by those of Europe; thus an enormous stimulus was given to manufactures and agriculture. And not only were the old industries developed, but many new ones were actually introduced from the east. From Greece came the manufacture of silk and the cultivation of the mulberry. From Tyre the Venetians learnt the art of making glass, an industry which they retain still, long after the days of their decline. The crusaders introduced from Africa the cultivation of maize and the sugar-cane. In Damascus they learnt notable improvements in the working of metals, and the making of cloth.

The increase of trade and manufactures led to the growth and rise of towns, one of the most important results of the crusades. The greatest immediate profit was reaped by the Italian cities, Venice, Pisa, Genoa, Amalfi, etc. Increase of trade and manufactures also brought wealth to the German towns in the valleys of the Danube and the Rhine, to the communes of France, to the trading and manufacturing cities of Flanders, finally to the north German towns, which formed the famous HANSEATIC LEAGUE (*q.v.*) The traders required protection from lawless oppression and from piracy. This was acquired in the north by combination, in the south by the promulgation of the earliest codes of maritime law, and generally by the acquisition of municipal privileges and independence. The crusades owed their origin to the spirit of religion and of chivalry. They gave the popes a vast increase of secular authority; they led to the institution of religious orders, like the Franciscans, Dominicans, and Carthusians; and of the military orders of the Templars, Hospitallers, and Teutonic Knights. But their ultimate results were fatal to the interests which they at first promoted. The contact with the east gave the first stimulus to the freedom of thought which was destined to destroy the superstitions on which rested the religious unity of Europe. The rise of the burgher class was followed by the rise of the spirit of nationality—both fatal to the class institutions of feudalism and chivalry. The nobles who fought in the crusades were compelled to find money by the sale of privileges to the towns, of their lands to the highest bidder, of freedom to their serfs. The social changes thus produced destroyed the mediæval system, and gave rise to those industrial relations which have been the dominant influence in Europe ever since.

[Heeren, *Versuch einer Entwickelung der Folgen der Kreuzzüge für Europa* (1808).—Adolf Beer, *Geschichte des Welthandels* (1860).—Blanqui, *Histoire de l'Économie Politique en Europe.*—Guizot, *History of Civilisation in Europe.*—Ranke, *Weltgeschichte*, viii.] R. L.

CULPA. An expression of Roman law expressing the want of proper diligence. The Roman jurists distinguished between *culpa levis* and *culpa lata*, and mediæval writers introduced a third degree of culpa which they called *culpa levissima*. *Culpa lata*, *i.e.* gross negligence, was treated nearly in the same way as unlawful intention (*dolus*). In some contractual and other relations there was no absolute standard for the degree of diligence required; the persons concerned had to give the same amount of care as they were accustomed to give to their own affairs. The omission of this degree of diligence is called *culpa in concreto* by mediæval writers. E. S.

CULPEPER, SIR THOMAS, the elder (1578-1662), author of *A Tract against the high rate of Usurie*, 1621, which, "presented to the high court of parliament," conduced to the reduction of the legal rate of interest from ten to eight per cent in 1624. The tract was reprinted with additions in 1641. The author meanwhile "set forth another treatise to evince the necessity of reducing money from eight to six" (preface to the *Discourse* of Sir Thomas Culpeper the younger), namely *A Tract against the high rate of Usurie*, 1640 (Brit. Mus., 1093 b. 98). The two treatises were reprinted together, with a preface, by Sir Thomas Culpeper the younger, 1688. F. Y. E.

CULPEPER, SIR THOMAS, the younger (1626-1697), a worthy son of the elder knight, assailed usury in a *Discourse* dated 1688. Thomas Manley, gent., answered this discourse, maintaining that "as it is the scarcity of money (and many borrowers) that maketh the high rates of interest, . . . so the plenty of money and few borrowers will make the rates low." Culpeper retorted with *The necessity of abating Usury reasserted*, 1670. Some other publications on the same subject are ascribed to Culpeper (Wood's *Athen. Oxon.*, ch. iv. p. 447). F. Y. E.

CULTURE, LARGE AND SMALL. The question of large or small holdings may be treated morally, socially, and economically. Here it will mainly be discussed in the latter aspect. It is the physical formation of a country which chiefly determines the size of holdings. It may be laid down as an axiom that, where the soil and climate are specially adapted for cereals and sheep, and where the physical configuration of the country admits of

large enclosures, there large holdings are the most productive. On the other hand, where districts are hilly, the soil rocky, the surface broken, or where soil and climate are specially favourable to permanent grass, there small holdings are best. It follows that, as a rule, grass counties have most, and corn counties have fewest, small holdings. But there are exceptions. Near large towns, small holdings will necessarily pay best. A small holding is a relative term. It differs in size when the holding is a market garden, a grass farm, or an arable land. A man may make his living off a very small tract of market-garden land, or off 5 acres of grass. It is doubtful whether an arable farmer, solely dependent upon the produce of the soil, and not engaged in any other profitable occupation, can live on less than 40 acres. All holdings may be considered small which are 50 acres or under. In England there were, in 1887, 294,729 small holdings, aggregating 3,559,000 acres. (See Major Craigie on "Agricultural Holdings," *Journ. Stat. Soc.*, 1887.) In 1913 there were 249,773 small holdings aggregating 3,581,375 acres, the decrease in number being among holdings not over 20 acres (*Agric. Stat.* Pt. I., 1914). In England, small holdings tend to increase. This increase arises from the fall in the price of cereals, the diminished capital of large farmers, the growing number of men who combine farming with other avocations, and also recently from encouragement by county councils, etc. Grain, meat, and wool can be produced more economically upon large farms, while pork, poultry, eggs, vegetables, are best suited for small holdings. Fruit-farming is not profitable for small farmers, because the initial outlay is large, the crops precarious, and the profits unreliable. In dairying small farmers enjoy no advantage over large. But in pigs, poultry, calf-rearing, vegetables, where minute care and attention secure safe and quick returns, small farms are economically preferable to large, and chiefly for these reasons. While labour has increased in price and deteriorated in quality, small farmers hire no labourers and employ the best that is procurable—their own. Again, the depression in prices has most particularly affected the produce of large farms, and has fallen comparatively lightly on the produce of small holdings, which is also of a more varied kind. The eggs of large farmers are in one basket, and the bottom has either fallen out or is rickety. The eggs of small farmers are stored in several baskets and the bottoms are relatively secure. Again, small farmers, selling direct to consumers, not only feel the fall of prices less, but eliminate the profits of middlemen. Lastly, small farmers are under fewer temptations to extravagance. They are more frugal and more industrious. They are sparing of everything except their labour, prodigal of nothing but themselves. Employing no hired labour, practising mixed husbandry, rearing stock instead of feeding them, often enjoying common rights, doing the work of two labourers and eating the food of one, small farmers weather storms which wreck their richer brethren. But it is a false argument that small farmers are necessarily more profitable to the community than large farmers, because the former pay higher rents. They undoubtedly pay higher rents; but they do so because the competition for holdings of this class is especially keen, because the expenses of buildings, approaches, hedges, and repairs are far heavier on small than on large farms, and because the land devoted to small farms is, as compared with ordinary agricultural land, what may be called accommodation land. In point of material comfort, wage-earning labourers in constant employment are better off than small farmers, whether they own or occupy the soil. It cannot, for instance, be questioned that the English agricultural labourer is better housed, better fed, and better clothed than the French peasant proprietor. Wherever a peasant proprietary prevails, except under most favourable conditions, the rural populations live hard, fare hard, and are on the border-line of starvation. In point of production, the product per acre in England exceeds that of any country on the continent except East Flanders. In point of agricultural science, English farming is, speaking generally, more advanced than in countries where the small culture of peasant proprietors prevails. Belgium affords a noticeable example of the stagnation which is produced by the multiplication of small cultivators. Seventy-five years ago the agriculture of Belgium was the first in Europe. Since then the size of the farms has decreased, and the number of small farmers continuously increased. Enterprise and experiment diminished with the extension of *la petite culture*. Farming has rather retrograded than advanced; the stock, and especially the sheep, have decreased; the small farmer only raises, and only eats, pork. In point of pauperism, rural England has fewer paupers than countries where small culture is the rule. In Prussia the number of peasant heads of families exempted from direct taxation because their earnings are less than £25 a year, amounted in 1888 to nearly 7½ millions. In France 3 millions out of the 7 million proprietors are unable to contribute largely to state objects by reason of poverty. In point of encumbrances, the soil of England is less burdened with mortgages than the land of countries farmed by small cultivating owners. In France, for example, the real owners of the soil are local money-lenders, and in some departments 80 per cent of the land is said to be mortgaged. Small culture cannot be regarded

as an agricultural panacea. It can only thrive in England under the economic conditions mentioned above. (See AGRICULTURAL HOLDINGS ACTS. Appendix.)

[Reports to the Royal Commission on Agriculture, 1881 and 1882, especially those of the late Mr. Jenkins.—James Howard, *Continental Farming and Peasantry* (1870).—Lady Verney, *Cottier Owners*, etc. (1885).—W. Beauclerk, *Rural Italy* (1888).—J. S. Mill, *Princ. of Pol. Econ.*] R. E. P.

CUM DIVIDEND. On the London stock exchange it is always understood that a share sold includes also the dividend which may have accrued upon it since the previous distribution, unless the bargain is made specifically EX DIVIDEND (*q.v.*) On Indian rupee paper, exchequer bills, and corporation bonds, however, the bargains are done "clean," or exclusive of dividend, which the buyer has to pay to the seller at the conventional rate, according to the number of days since the previous distribution of dividend.

A. E.

CURATOR BONIS. A guardian appointed by a Scotch court to manage the estates of a minor or of a lunatic. His functions are to realise and protect the estate. He has no charge of the ward's person, except in so far as it is his duty to see the ward properly educated.

[Erskine's *Principles of the Law of Scotland*, 1880.] J. E. C. M.

CURRENCY. This word is sometimes employed in the sense of circulating medium, sometimes in the sense of standard of value. Adam Smith says (book iv. ch. iii.), in the well-known *Digression concerning Banks of Deposit, particularly concerning that of Amsterdam*, "The currency of a great state, such as France or England, generally consists almost entirely of its own coin." Here a standard of value is referred to, and the constancy of the "Bank Money" of the bank of Amsterdam is mentioned as one of its advantages. Adam Smith's comparison of the currency to the road which conveys the produce of a country to market (*Wealth of Nations*, book ii. ch. ii.), and J. S. Mill's description of it as "a machinery for doing quickly and commodiously what would be done, though less quickly and commodiously, without it" (*Principles of Political Economy*, book iii. ch. vii. § 3), illustrate the services which the currency performs. *An ideally perfect system of currency*, to be based on a system of tabulatory prices, is dealt with by Jevons, *Investigations in Currency and Finance*. Some idea of the same kind appears to have passed before the mind of D. Ricardo, *Proposals for an Economical and Secure Currency* (Ricardo's *Works*, 2nd ed. p. 397). His definition of a perfect currency is as follows: "A currency may be considered as perfect of which the standard is invariable, which always conforms to that standard, and in the use of which the utmost economy is practised." A tabular standard of value was suggested by Joseph Lowe to give a steady value to money contracts through reference to the prices of different articles. A similar method was recommended by G. Poulett Scrope, whose remark, "without stability of value money is a mere fraud," goes to the root of the matter. The subject had also been considered by G. R. Porter. Sir Robert Giffen also carried on the investigation. The idea of a standard of value to remain as far as possible constant, is included in the principle on which CORN RENTS (*q.v.*) are based (see also CIRCULATING MEDIUM; INDEX NUMBERS, etc.)

[Jevons, *Investigations in Currency and Finance.*—Ricardo's *Works*, ed. M'Culloch.—Joseph Lowe, *The Present State of England in regard to Agriculture, Trade, and Finance*, 1822.—G. Poulett Scrope, *Principles of Political Economy*, 1833.—Porter, *Progress of the Nation*, 1815.]

CURRENCY DOCTRINE OR PRINCIPLE. A name given to a doctrine or opinion which supplies the basis for the method adopted by Sir R. Peel when regulating the paper currency by the Bank Act of 1844. It appears to have been first used by Mr. G. W. Norman, who, in his evidence before the House of Commons Committee on Banks of Issue, 1840, *Q.* 2018, speaking of the circulation, referred to "currency principles, according to which it would increase or decrease with increase or decrease of bullion." The evidence of Mr. Gilbart, before the same committee, 1841, showed that he understood the term in a similar sense. *Q.* 932, "I mean by the phrase 'currency principles,' a bank which shall do nothing else but issue notes for gold, and gold for notes;" and *Q.* 933, "I do not at all admit that those are the correct principles upon which the currency should be administered." Mr. T. Tooke, *History of Prices*, vol. iv. p. 167, and *passim*, agrees with Mr. Gilbart. The controversy was continued by others, among whom may be cited Mr. Jones Loyd (Lord Overstone), who, in his writings and in his evidence before the Select Committee, H. of C., 1840, and also before the Select Committee on Bank Acts, H. of C., 1857, expressed the same opinion, *Q.* 648, 1857, "The paper notes or certificates ought to be preserved at their proper value by making them, under all circumstances, conform in amount to the coins or metallic circulation which they represent." Sir R. Peel employed the same opinion as the basis of the argument, on which he founded the reasons for the changes which he introduced in the banking system of the country, through the Bank Acts of 1844-45 (see speech in H. of C. on Bank Charter, 6th May 1844). The principles and the methods of action which Sir R. Peel supported on that occasion, were in opposition, as he admitted, to "the high authority of Adam Smith and of Ricardo," who held that freedom of competition and immediate convertibility into coin

at the will of the holder, coupled, it should be understood, with such provisions as would secure the holder from loss under any circumstances, would prevent the notes of banks from being issued in excess. Sir R. Peel might have added that this opinion of his own was also in opposition to that of Mr. Huskisson. Sir R. Peel referred in the speech quoted above to the BULLION COMMITTEE REPORT (*q.v.*) which, it should be pointed out, was made during the period of suspension of specie payments, and recommended a return to payments in specie as a cure for the evils deprecated. Sir R. Peel was by far the most powerful supporter of this doctrine, which is of importance as laying down a principle unknown before—namely that it is essential that the bank notes circulating in a country should always conform in amount to the metallic circulation which they represent, see above—the result of the acceptance of which has been the separation of the banking department from the issue department of the Bank of England (see BANK OF ENGLAND). The doctrine has never, it should be mentioned, found general acceptance with economists. It marks the difference between those who regard bank notes as "money," and those who consider them, in the words of Huskisson, as "circulating credit," and a "substitute for money in the transactions of the community" (Huskisson on the *Depreciation of the Currency*). While insisting, and properly, on adequate security being given for the bank note, the currency doctrine leaves out of sight the operation of all other instruments of credit, equally effective in their way, as bank notes, on price and the movements of commodities.

[See books referred to under BULLION COMMITTEE.—Evidence before Committee on Banks of Issue, House of Commons, 1840-41.—Committee on Bank Acts, House of Commons, 1857.—Tracts and other publications on "Metallic and Paper Currency," printed by Lord Overstone, 1837-57.—Speeches of Sir R. Peel on "Bank Charter," House of Commons, May 6, 20, etc., 1844, etc.]

CURVES * are amongst the most useful appliances which mathematics lends to the social sciences. The curves most frequently employed in this way are *plane* curves: such as AB in the annexed figures; referred to rectangular axes OX and OY in such wise that the curve represents the interdependence of two variable quantities O*x* and O*y*, the change in one of the variables O*y* which attends a change in the other variable O*x*. Two species of curve may be distinguished: (1) where the quantitative relation between the variables is not supposed to be numerically ascertained, the datum being of an indefinite character, as that O*x* continually increases with the decrease of O*y*; and (2) where the curve is the record of statistical observations.

(1) The first kind of curve is used in abstract economics; where the data are in general quantitative indeed but not numerical, *e.g.* that the demand for a commodity increases as its price decreases. Jevons's hope of obtaining demand curves by statistical observation (*Theory*, Introduction, p. 23, 2nd ed.), may appear chimerical. There is one datum of the kind indicated which curves are specially adapted to represent, the property of *increase at a decreasing rate*, which is at the root of the two most exact theories in political economy, viz. the law of rent and the law of final utility. This important relation is simply expressed by means of a curve concave towards the axis OX such as AB in Fig. 1. In this case the quantity represented by the

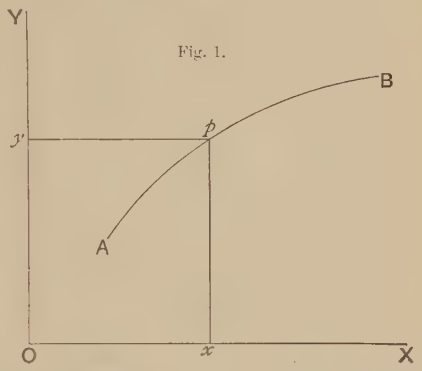


Fig. 1.

line O*y* continually increases with the increase of O*x*, but the rate of increase continually decreases. The same idea may be expressed by

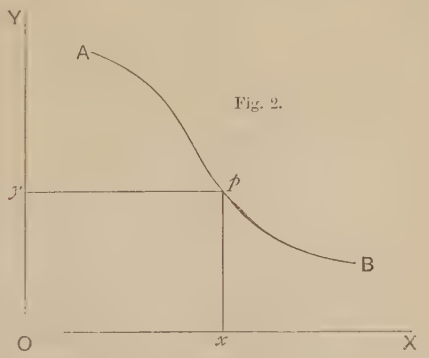


Fig. 2.

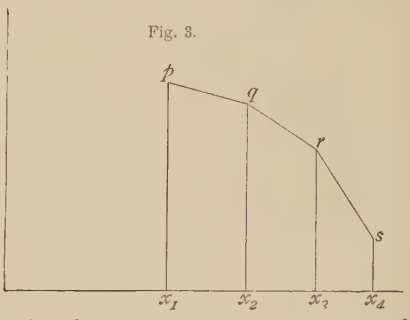
a descending curve such as AB in Fig. 2, if one quantity is represented by the *area* contained between the right lines OY, O*x*, *xp*, and the curve AB. This quantity continually increases with the increase of O*x*, but at a decreasing rate. To represent such relations curves appear a more potent aid than ordinary language, and perhaps even than algebraic symbols. Diagrams are preferred before symbols by Prof. Marshall (*Principles of Economics*, preface to first edition). "The use of the latter [diagrams] requires no special know-

ledge, and they often express the conditions of economic life more accurately as well as more easily than do mathematical symbols."

It may be observed, however, that, as compared with FUNCTIONS (*q.v.*), curves have a somewhat limited use. They are almost restricted to the simple case of two variables. Thus in the theory of rent, a curve happily represents the returns yielded by successive applications of doses of outlay, as in Jevons's illustration (*Theory of Political Economy*, ch. vi.) Or, according to a construction which De Quincey appears to have been the first to use, the successive parts of one co-ordinate Ox may represent qualities of land (arranged in a descending order), while the corresponding values of Oy stand for the returns made to *equal* capitals applied to each portion of land (cp. Prof. Marshall, *Principles of Economics*, p. 483, 2nd ed.) But, when it is attempted to combine these two constructions, as the present writer has done (*British Association Report* for 1886), the unfamiliar ideas of solids and surfaces are introduced; and clearness is sacrificed. To take another example (the DEMAND CURVES, *q.v.*) so much extolled by recent economists, are available only on the hypothesis that, while the price of the article under consideration varies, the prices of all other articles remain constant (Auspitz und Lieben, *Theorie der Preise*). But this is a somewhat narrow hypothesis, excluding the important cases of "competing" and "completing" commodities (*ibid.*), as we may call those articles which are related either on the one hand, as beef and mutton, or on the other hand, as tea and sugar. In such cases a symbolic expression representing the advantage of the consumer as a *function* of his purchases is much more helpful than a curve. Again, in the theory of distribution the profits of the *entrepreneur*, depending on the one hand on the sales of finished products, and on the other hand on the expenses of production, wages, interest and rent, and so forth, is better represented by a function of several variables than by a curve. A curve may be best adapted to the Ricardian first approximation that the profits on successive doses of capital are equal. But it is not so easy to represent geometrically the modifications of this conception which a nearer view requires — that the profits of an *entrepreneur* are not proportional to the amount of capital employed, that the wages of a labourer are in a certain sense just equal to the product of his labour (Marshall, *Principles of Economics*, 2nd ed. vol. i. p. 566). Such theories appear to the present writer to flow more naturally from the analytical calculus of maxima and minima than from any use of curves. For further observations as to the use of curves in economics, see FUNCTIONS and MATHEMATICAL METHOD.

(2) Of the curves obtained by statistical observation it suffices here to remark that they are for the most part derived from a discontinuous set of points, such as p, q, r, s, in Fig. 3 (or set of right lines joining those points). Here

Fig. 3.



the lengths px_1 qx_2 rx_3 sx_4 etc., represent the quantities of some variable under observation at finite (not infinitesimal) intervals of time, space, or other variable. Cases in which the registration is continuous, as in some meteorological observations, are rare in social statistics. (As to the use of curves in statistics see the GRAPHICAL METHOD and STATISTICS.)

F. Y. E.

CUSTODI, PIETRO (1771-1846), born near Novara. He was by profession a lawyer, but soon entered into journalism and directed the paper *Amico della libertà Italiana*. He became privy councillor and baron. The *History of Milan* by Pietro Verri was continued by Custodi; as an economist he is widely known as the editor of a collection of the principal Italian economists in fifty volumes. M. P.

CUSTODIA. An expression of Roman law denoting a special duty of taking care of a bailed object (see BAILEE). E. S.

CUSTOM — CUSTOMS DUTIES. Duties charged by law upon commodities imported into or exported from a country. The duties of customs "seem to have been called customs, as denoting customary payments which had been in use from time immemorial; they appear to have been originally considered as taxes upon the profits of merchants" (*Wealth of Nations*, bk. v. chap. ii. art. iv.) As early as 1336, however, complaints were made by the producers of wool, at that time the most important dutiable article, that the intended special taxation of merchants was not effected by customs duties, and from 1344, when the price of wool ceased to be fixed by law, such duties were for a long period supported by merchants, and opposed by the agricultural classes. In 1490, a "retaliatory" and additional duty imposed on malmsey wine imported from Crete "until the Venetians should abate their new impositions," was the first step in the long series of duties imposed for other than revenue purposes, and eventually mainly for the protection and encouragement of home industries. In

1815 when, as Mr. Dowell says, "taxation reached its zenith," the public demand that the enormous necessities of the government should be met as far as possible by the imposition of protective tariffs had resulted in a customs system of the most complicated and onerous description, and even when the burdens of war diminished, the reductions effected in the customs duties were small as compared with the diminution of the direct taxes. In 1842 Sir Robert Peel carried his first great measure of tariff reform, his policy being to utilise the direct taxes, and especially the income-tax, in order to remove the comparatively unproductive duties with which traders were met in every direction. In that year some 750 articles out of about 1200 were removed from the tariff, the loss to the revenue being not more than £1,200,000. Three years later, Peel effected a further revision, abolishing the duties on more than 400 articles, principally raw materials, and repealing all export duties, at an aggregate loss of £3,500,000. In 1846 the duties on corn and some other articles of food were discarded at a cost of £750,000. In 1853 Mr. Gladstone took a further step in the same direction, and, by the same means as his predecessor. In 1860 he proposed further reductions of import duties, and took what has been described as "the final step in the reform of one of the most comprehensive and complicated lists of prohibition and commercial restrictions, in the form of frontier or port duties, that ever hindered the development of the trade and manufactures of a nation." This final step involved a loss of revenue of £2,250,000.

The following table shows the net produce of customs duties in the United Kingdom in each tenth year from 1837 to 1907 inclusive:—

1837 .	£22,063,000	1877 .	£20,099,000
1847 .	21,656,000	1887 .	19,634,000
1857 .	23,276,000	1897 .	20,618,000
1867 .	22,655,000	1907 .	32,181,000

The following table shows in detail the net produce of the customs duties for 1912-13:—

Chicory, Cocoa, Coffee . .	£46,000	
	332,000	
	170,000	
Tea . . .	6,152,000	
Total duties on imported non-alcoholic beverages .		6,700,000
Spirits . . .	£4,167,000	
Wine . . .	1,110,000	
Foreign Beer . .	27,000	
Total duties on imported alcoholic beverages .		5,304,000
Sugar		3,052,000
Dried Fruits . . .		465,000
Tobacco and Snuff . .		17,254,000
Motor Spirit . . .		722,000
Other Receipts . . .		20,000
		£33,517,000

In 1909 the Excise department, formerly under the control of the Inland Revenue, was amalgamated with the Customs. The two departments, though nominally independent, had always worked in close relationship and transacted much of each other's business, many of the duties collected by each being interdependent or countervailing. Both included duties on beer, chicory, spirits and tobacco. The arbitrary distinction between customs and excise in the public accounts was therefore of little value for economic purposes. The two departments now work together as the Board of Customs and Excise.

The department performs many functions other than the collection of revenue. It is responsible, *inter alia*, for the measurement of the tonnage of vessels, the registration of ships, the collection of light dues, the receipt of wreck, the settlement of salvage claims, the maintenance of fisheries conventions, the observance of quarantine regulations, the examination of merchandise marks, the collection of statistics (import and export, etc.), the prevention of the importation of injurious literature, lottery advertisements, etc., the enrolment and payment of men for the Royal Naval Reserve. It undertakes work in connection with the Old Age Pensions and the National Insurance Act (1911). Under the latter it investigates various claims and questions and transmits the information collected to the Insurance Commissioners, distributes Insurance literature, and in seaport towns gives information as to the Seamen's National Insurance Society. Under the Sale of Food and Drugs, and similar Acts, the department is entrusted with such duties as the examination of imported tea and the disposal of all declared unfit for human use, and the prosecution for illegal importations of adulterated or impoverished butter or milk. A number of foreign reprints of English books also are annually confiscated at the ports of entry by this department (Copyright Act, 1911).

An important feature of any well-organised customs system is that by which dutiable articles are allowed to be deposited in warehouses under bond for the due payment of the duties when delivered for consumption (see BONDED WAREHOUSES). The earlier economists strongly advocated the maintenance of such warehouses, mainly on the ground that the consumer escapes charges for interest on the duties paid by the merchant, but it is now evident that the system is of great and very varied utility. Not only is the payment of duty deferred, but it is not exacted at all on the waste occasioned by natural causes, and by the various operations allowed to be effected under supervision in bonded warehouses, prior to duty being charged. Bonded goods may be removed from warehouse to warehouse, or they may be re-exported or transhipped free of duty, which is in fact only paid when the goods are to be taken into consumption.

The incidence of customs duties, like those of other taxes on commodities cannot be accurately determined without taking into consideration the various conditions attending the production and supply of the article taxed, and its relation to the requirements of the consumer, and even when the incidence of such duties has been established, their effect in restricting international trade, or in diverting it from the channels in which it would naturally flow, must be ascertained before it can be seen whether the direct and indirect cost of the duties outweigh their advantages. It is usually considered that the burden of customs duties will fall eventually upon the consumer, whether they are charged on the export or on the import of the dutiable article, but in the case of export duties it usually happens that the restriction of trade in the dutiable article, or its diversion to other markets, diminishes the profit of the home producers and distributors to an extent far beyond the yield of the duty, and in the case of import duties it has been considered that some portion of the burden will at times be borne by the merchant by whom the duties are advanced, his ability to transfer it to the consumer being by no means absolute. (See COST OF COLLECTION OF TAXES.)

[*Annual Reports of the Commissioners of Customs.*—Ham's *Customs Year Book.*—Dowell's *History of Taxation and Taxes in England.*—Hall's *History of the Customs Revenue.*] T. H. E.

CUSTOM (HABIT)—ITS PLACE IN ECONOMICS. When the two are distinguished, habit is an unwritten law or tradition of our individual selves, custom is so for a society of men. Every custom has thus begun in some habit; and both custom and habit have a power analogous to *vis inertiæ* as defined in Newton's First Law of Motion. Men continue in a state of rest or of uniform motion in a straight line, except in so far as they are led to change that state by force impressed on them. Where actions are determined by the necessity of physical, physiological, or even of ethical laws, they are not said to be done by habit or custom, the latter words being confined to such actions as are more evidently modifiable by human caprice. They are not used of nature but of second nature.

In men more than in other animals habits become customs, social functions creating social structures. The knowledge of the past is preserved, and in the case of scientific discoveries and mechanical inventions, for example, one generation of learners can begin at the point where the preceding left off, and convert into habit and custom what was at first a conscious effort and deliberate act of will. It is an essential condition of a skilled, *i.e.* of nearly every industry that practice makes perfect; and the standard of perfection becomes higher if the skill can be transmitted by teaching, and need not be acquired by each individual *ab initio*, unaided. This applies even to the art of walking upright and the perception of distance by vision. The most familiar economical examples are those given by Adam Smith in his first chapters (see DIVISION OF LABOUR). To his already old text must be added the equally old commentary that the bent and fitness of the individuals must be consulted. Some are born to use tools; others can make better use of their eyes or voice than of their hands, etc. Wherever the bent lies, habit will be acquired fastest when the bent is followed. In the present condition of the working classes in Europe the sons are as a rule brought up to their father's trade; yet, owing to the frequent changes caused in a trade by new inventions, this practice can hardly lead to the growth of castes (see CASTE) such as prevail in the East. But even in our own country custom may often make a long stand against new inventions, to the great detriment of economy, *e.g.* in retention of fallows and opposition to reaping machines.

In the more complicated economical relations, where distribution is concerned, custom as elsewhere may be both a strength and a weakness to those bound by it. It may become an instrument aiding progress; or it may become a fetter. Customary rates of wages may be rates that neither fall so low nor rise so high as the rates that would be fixed by competition in open market, and so it is with customary rents and customary prices. What has always been paid acquires an apparent justification from usage; and this is found in the case of taxes, as appears in the very name Customs, where novelty and unpopularity as a rule go together. The times and ways of payment are largely fixed by custom more than by conscious regard to expediency. Wages, for example, are paid in the case of London workmen by the week, of many Scotch workmen by the fortnight, of domestic servants by the month, of many farm servants by the year.

When wages have been raised by a temporary cause, they may be maintained by custom, in the sense that the labourers' standard of living may be permanently raised. This result can hardly be secured without some form of combined action among the labourers. Combination implies criticism and initiative, and seems a necessary aid if custom is to be a strength instead of a weakness.

It is only roughly true that men are emancipated from custom in proportion to their education. They are seldom removed by it from the influence of fashion (see FASHION), which is simply a form of custom where the capriciousness of the unwritten law is not concealed, and where the matters concerned are supposed to be beyond exact utilitarian calculation. Fashion often determines not only what men eat and wear, but where they buy

and even to some extent what they pay. The goodwill of a business is simply this fashion considered from the purveyor's point of view. Thomas Telford the engineer formed part of the goodwill of the Salopian coffee-house at Charing Cross (see Smiles' *Life of Telford*). It is perhaps the tendency of an active commercial community to go from the one extreme, of regard for custom, to the other, regard for mere cheapness as measured by price without due account of quality. Modern improvements, such as railways, and telegraphs, and co-operative stores, play a great part in breaking down custom and causing a rough equality even in retail prices. In the wholesale markets, where both sellers and buyers are alive to their commercial interests, the power of custom is a smaller factor than in retail dealings. But in the stock markets and elsewhere it is still a factor (see *e.g.* Babbage, *Mach. and Manuf.*, 3rd ed. ch. xv. p. 145;—Ellis, "Influence of Opinion on Markets," *Economic Journal*, March 1892, pp. 109 *seq.*) It may be doubted if customary profit is so tangible a conception as it seemed to Adam Smith; yet in recent Continental Usury Laws it figures still very largely, as it did in the Middle Ages. Where instead of prices or profits conditions of bargaining are concerned, it is not only a factor but the main factor, for commercial law is simply the customs of merchants to which the state now gives legal effect. There is a sense in which nearly all statute law is custom, defined, and made consistent and it may be imposed on an unwilling minority, as in the FACTORY ACTS, *q.v.* To make custom our friend for life we bind him under penalties.

If prices are affected by custom, still more is the currency itself. Custom prevents our adoption of a decimal currency. No money is currency if it falls under suspicion, even groundlessly, like Wood's pence under Swift's attacks, and is refused in ordinary transactions. Money is unlike all other tools in depending almost entirely on custom, instead of mechanical fitness, for its efficiency. The general outward character of European coins has accordingly changed only by a series of variations which were, each, very slight indeed at the time of their introduction. To be current, a coin needs to have a familiar look and resemble its predecessors in almost all respects. In paper money too, as in Scotch one pound and English five-pound notes, custom is essential to currency. Somewhat analogous is the recognition of articles as good because of a well-known trade mark.

There are many instances of the power of custom in political history. Good statesmanship is averse to an absolutely new departure, and makes only such changes as at least *seem* to be an outgrowth of old customs, and a return to some old Magna Charta instead of a new institution. There is no contradiction between custom and reflection. If the former by itself is inertia, the latter by itself is insubstantial, and its product ephemeral, like a learning that dispenses with memory and history, and trusts to unassisted original study. Though, especially in matters economical, deliberate reflection and calculation will inevitably subject all customs and customary institutions to the test of criticism, yet any new order will be built up out of the materials of the old, and will only itself be permanent by becoming customary.

[For the influence of custom on Prices, Wages, Rent, etc., see Richard Jones, *Political Economy*, ed. Whewell, 1859, *Distribution of Wealth* (1831).—J. S. Mill, *Polit. Econ.*, ii., iv. (1848).—T. E. Cliffe Leslie, *Essays in Pol. and Moral Philosophy*, 2nd ed. 1888.—On the emancipation of modern industry from mediæval custom, etc., see Cobden, *Engl., Irel., and America.*—On custom and the currency, see Jevons, *Money*, ch. viii. p. 78, and in relation to the morphology of coins, see C. F. Keary, *Numismatic Chronicle*, v. 165-98, vi. 41-95.—On custom and habit in general see Rümelin, *Reden und Aufsätze* (1881), ii. pp. 148 *seq.*, *Das Wesen der Gewohnheit*, and compare Hegel, *Rechtsphilosophie*, § 151.—On custom as standard of living, see Malthus, *Essay on Pop.*, i., ii., iv., viii.—On fashion, see Hermann, *Staatswirthschaftliche Untersuchungen* (2nd ed. 1870), pp. 99, 100.—On custom as *Status* in distinction from *Contract*, see Maine, *Ancient Law*, *passim*.—On goodwill, etc., see Schäffle, *Die nationalökonomische Theorie der ausschliessenden Absatzverhältnisse* (Tübingen) 1867.] J. B.

DAIRE, EUGÈNE, born in Paris 1798, died there 1847. He commenced life as a collector of the *contributions directes*, a direct tax on individuals imposed on their incomes, at Arpajon (Seine-et-Oise), but was dismissed from his employment after the revolution of 1830, on account of the opinions held by a relation of his, which he himself, however, did not share. He was afterwards restored to his post at the request of the inhabitants of the place. In 1839 he resigned his office, desiring to apply himself to economic study. After some preliminary attempts he discovered the direction in which his true vocation lay, and devoted himself to preparing the collection of the works of the principal economists, published by Messrs. Guillaumin. Of the fifteen volumes of this collection he edited six: *Les Économistes financiers du XVIIIe siècle* (Vauban, Boisguillebert, J. Law, Melon, and Dutot), *Les Physiocrates* (Quesnay, Dupont de Nemours, Mercier de la Riviere, Abbé Baudeau, and Le Trosne), the *Œuvres de Turgot*, the *Œuvres diverses de J. B. Say*, the first volume of *Mélanges* (David Hume, V. de Forbonnais,

Condillac, Condorcet, Lavoisier, and Franklin). Daire wrote, in these volumes, a special notice of each author. Some of these are of great value, for example, those of Law and Turgot. Equally important is his introductory exposition of "the theories of the Physiocrats," which gained him a prize of 1500 fr. (£60) from the Academy of Moral and Political Science. The news of this success only reached him on his deathbed. An able financier and a distinguished economist, Daire was too early lost to the science, of which, had his life been spared, he might have been a distinguished expositor. A. C. f.

DALBIAC, General Sir James Charles (1776-1848), served with distinction in the Peninsular War, was Tory member for Ripon 1835-37. He published, in 1841 (London), *A few words on the corn laws, wherein are brought under consideration certain of the statements which are to be found in the 3rd ed. of Mr. M'Culloch's pamphlet on the same subject.* See M'Culloch, *Liter. of Pol. Econ.*, p. 80. He wrote also a *Military Catechism for the use of young Officers and non-commissioned Officers of Cavalry* (1817).

To the same author is perhaps to be attributed the following tract ascribed on the title page to "J. *G.* Dalbiac, of Buckham Hall, Uckfield" (Sussex). *Proofs of existing agricultural distress, and an endeavour to show the necessity of permanent and efficient protection to agriculture by permanent and efficient legislative enactments* (Lewes, 1820). The writer employs the form of a dialogue between a farmer and a manufacturer. He argues in the spirit of Western, whose "Resolutions" of March 1816 he quotes in his appendix. J. B.

DALRYMPLE, Sir John, 4th baronet (1726-1810), was the eldest son of Sir William Dalrymple of Cranstoun. He was educated at Edinburgh and at Cambridge, and became an advocate at the Scottish bar in 1748. From 1776 to 1807 he was one of the barons of the exchequer. In 1757 he published an *Essay towards a General History of Feudal Property in England* (4th and enlarged edition, 1759, 8vo), praised by Hume (J. H. Burton, *Life*, ii. 37). Part of this work was revised by Montesquieu. Dalrymple printed in 1764 *Considerations on the Polity of Entails* (2nd ed. 1765, 8vo), a very able defence. His *Memoirs of Great Britain and Ireland, 1681-92* (3 vols. 4to, 1771-88, new ed. 1790, 3 vols. 8vo), largely based upon unpublished documents, is chiefly interesting from a biographical and anecdotal point of view. He received a visit from Dr. Johnson at Cranstoun in 1773 (Boswell, *Life*, 1887, v. pp. 401-404). He was given to chemical and industrial experiments, and in 1798 interested himself in teaching the making of soap from herrings. He was succeeded in the baronetcy by his fourth son, who became eighth earl of Stair in 1840.

His economic writings are:

An Appeal to Facts in a Letter to Earl Temple London, 1763, 4to (includes an account of the money raised on loan for the public service from 1755 to 1762).—*The Question considered: Whether wool should be allowed to be exported when the price is low at home on paying a duty to the public?* London, 1781 (2nd ed. 1782, answered by Rev. N. Forster and two anonymous pamphleteers. The author gives various reasons why it should be permitted).—*Address and Proposals on the subject of the coal, tar, and iron branches of trade*, London, 1784, 8vo (written to attract the attention of speculators to the coal, ironstone, and limestone on his estate in Edinburgh).—*Address to the Landholders of England upon the interest which they have in the state of the distillery laws*, London, 1786, 8vo (proposes a tax on stills).

[*Dictionary of Nat. Biogr.*, xiii. 424-425; M'Culloch, *Literature of Political Economy*, 1845]. H. B. T.

DAMAGES. The technical name for a sum of money claimed by a person who has suffered injury or loss by reason of a breach of contract or of another's wrongful act or omission. In actions for damages it belongs to the province of the jury to assess the amount, but there are certain established rules, according to which they ought to find, and which the judge ought to explain to them, *e.g.* the rule relating to remoteness of damage, according to which the loss for which compensation is claimed must be something immediately connected with the breach of contract or wrongful act or omission, and must be such as the defendant would reasonably have contemplated as the result of such breach, act, or omission. The non-receipt of money promised to be paid on a certain date may prevent the promisee from making a profitable investment, or may even, through causing his insolvency, bring about the ruin of his prospects; but these are not the ordinary results of the non-payment of a debt, and no damages can therefore be claimed beyond the amount of the debt with interest. In a case of breach of contract for the sale of goods, the measure of damages is the difference between the price named in the contract and the market value of the like goods at the time when the contract was broken. As a general rule, damages are not awarded as a compensation for injuries which do not result in a pecuniary loss, but in exceptional cases it is admissible to compensate the plaintiff for wounded feelings or bodily pain, *e.g.* in actions for breach of promise to marry, in actions for defamation (libel or slander), in actions for assault, etc.

In some cases the conduct of the defendant may be such as to make it permissible for the jury to award damages in excess of the amount which would be sufficient to compensate the plaintiff for the injury suffered by him, *e.g.* trespass of a particularly insulting character, seduction under aggravating circumstances,

In such a case the damages are said to be "exemplary" or "vindictive." On the other hand the damages may be so small that they could not reasonably be looked upon as compensation for any injury. Damages of the latter kind, which in technical language are called "nominal damages," may occur in two classes of cases:—(1) When the plaintiff's intention is not so much to obtain compensation, as to make use of an action for damages as a convenient mode of procedure for asserting a right, *e.g.* action of trespass for the purpose of establishing a title to lands; (2) When the plaintiff, though technically in the right, ought not, according to the opinion of the jury, to succeed in the action, *e.g.* in action for defamation when the defendant through flaws in the evidence, has failed to establish his plea of justification, but has convinced the jury that the plaintiff's character is worthless. The expression "ordinary damages" is used in contradistinction to "nominal" or "exemplary" damages. In certain cases it is recognised by the law that the requirements of the plaintiff cannot be adequately satisfied by damages, and SPECIFIC PERFORMANCE (*q.v.*) is decreed. E. S.

DAMAGES, MEASURE OF. Damages are the pecuniary satisfaction which a plaintiff may obtain by success in an action. The rules by which such satisfaction is measured form a branch of law known as the Measure of Damages.

[See as to English Law, *Damages*, by J. D. Mayne and L. Smith, London, 1884; and as to American Law, *The Measure of Damages*, by T. Sedgwick, New York, 1874.] J. E. C. M.

DAMETH, HENRI (1812-1884), born at Paray-le-Monial (Saône-et-Loire), died at Geneva. He was in early life a devoted follower of FOURIER (*q.v.*), but became, through conscientious study, one of the most ardent popularisers of economic science. He published in 1842 a work entitled *Défense du Fouriérisme*, 1 vol. in 18mo; then in 1849, *Un mémoire sur la fondation des cités industrielles dites cités de l'Union*, in 8vo; after this he filled, from 1850 to 1855, the position of editor-in-chief to the *Avenir de Nice*. Becoming convinced of the soundness of economic theory he shook himself clear of the doctrines of Fourier, and published: *Le Juste et l'Utile*, 1859, 1 vol. in 8vo; *L'Économie politique et le spiritualisme*, 1862, 1 vol. in 8vo; *Introduction à l'étude de l'économie politique*, 1865, 1 vol. in 8vo; *Les Banques publiques d'émission*, 1866, 1 vol. in 8vo (in this he supported the freedom of banks); *Le mouvement socialiste et l'économie politique*, 1869, 1 vol. in 18mo; *La question sociale*, 1871, 1 vol. in 12mo; and finally *Les Bases naturelles de l'économie sociale*, 1872, 1 vol. in 18mo. He lectured with success, in 1864, on political economy at Lyons, in connection with the chamber of commerce of that city, and at the Academy of Geneva, from 1865. His works are lucid in style and temperate in tone. He assisted MM. Victor Philippe, Jean Tisseur, and Alph. Courtois in founding the Society of Political Economy at Lyons (1866). A. C. f.

DAMNUM EMERGENS, *i.e.* the loss or injury resulting to one person in consequence of his having made a loan to another, was usually regarded by canonists and theologians in the later middle ages as justifying a demand for INTEREST (in the original and limited sense of that word, *q.v.*) The doctrine of compensation to the creditor arose out of an obscure passage in the Roman law; and the sharp distinction between *damnum emergens* and LUCRUM CESSANS (*q.v.*), which was for a long time rigidly observed by writers on the subject seems to have been first drawn by the greatest of the mediæval glossators, Accursius. But while the civil law recognised both these reasons as justifying a demand for compensation, Aquinas and many of the schoolmen accepted only *damnum emergens*. Until the end of the middle ages, moreover, the principle was maintained that compensation was only due when the period for which the loan was originally made had expired, and the debtor showed culpable neglect in fulfilling his obligations. The theoretical distinction between usury and interest tended, however, to disappear, owing to (1) the concession, which even Aquinas made, that such a recompense could be justly bargained for at the time of making the loan, (2) the concession that the payment might take the form of a certain percentage for each period of delay, and (3) the practice of making the original term, during which no payment for the use of the money was required, so short that the loan came to bear interest almost from the first. The final step was taken when some of the Protestant theologians, especially Melanchthon, and many of the later Roman Catholic canonists, especially Navarrus, recognised the justice of contracting to receive interest even before there had been any delay, *i.e.* from the time the loan was contracted. As by this time *lucrum cessans* had also come to be accepted as a sufficient cause for the payment of interest, it was possible to meet all the necessities of the growing trade of the period without a violent breach with the doctrine of usury.

A characteristic example of the transitional literature of the 16th century is *The Arraignment and Conviction of Usury* by Miles Mosse, London, 1595. He sums up the matter as follows: "There are two manifest and essential differences between Usury and Interest, which do so distinguish the one from the other, as that they cannot possibly be confounded. One difference is this: Usury is an overplus or gain taken more than was lent; Interest is never gain or overplus above the principal, but a recompense demanded and due for the *damage that is taken* or the *gain that is hindered* through lending. Another difference is this:

Usury accrueth and groweth due by lending, from the day of borrowing, unto the appointed time of payment; Interest is never due but from the appointed day of payment forward, and for so long as I forbear my goods after the day in which I did covenant to receive them again." W. J. A.

[By far the best treatment of the subject is to be found in Endemann, *Studien in der Romanisch-kanonistischen Wirthschafts- und Rechtslehre*, vol. ii. (1883) ch. viii. §§ 1-3. For the views of the Reformers, see also Schmoller, *Zur Geschichte der nationalökon. Ansichten in Deutschland*, etc. 1861, p. 98 [reprinted from *Zeitschr. f. d. ges. Staatswissenschaft*, Bd. xvi.] The subject is also slightly touched in F. X. Funk, *Zins u. Wucher*, 1868, and *Geschichte des Kirchlichen Zinsverbotes*, 1876. For brief accounts in English, see Ashley, *Economic History*, vol. i. part i. (1888), and Böhm-Bawerk, *Capital and Interest*, tr. Smart, 1890.]

DAMNUM FATALE (Scot.) Loss arising from inevitable accident beyond prevention by human prudence. A. D.

DANEGELD. This is the first money tax of which we have any record in English history. Ethelred II. levied two shillings on every hide of land to provide a fund for buying off the Danes. His successors, even the Danish kings, retained this as an annual tax, long after the original pretext had disappeared. Edward the Confessor is said to have abolished the Danegeld, but William I. again exacted it, though at three times the original rate, viz. six shillings for every hide. But under the Norman kings it was an occasional instead of an annual tax. That the impost was unpopular is proved by the assertion of Henry of Huntingdon that Stephen, on his accession, promised to abolish it. The promise was not kept, and the Danegeld was regularly collected in the first seven years of Henry II.'s reign. By this time the tax had become a fixed sum from each county, and any surplus went into the pockets of the sheriffs who collected it. In 1163 Henry II. proposed to take the tax out of the hands of the sheriffs, and to bring it direct into the exchequer. The proposal was opposed by Becket, and from this time the term Danegeld disappears from the Pipe Rolls. It has often been asserted that Becket's opposition led to the abolition of the tax, but this is an error. The two shillings from the hide were frequently levied in the later years of Henry II. under the name of *hydagium*. They were collected under Richard I. in 1194, and in 1198 were raised to five shillings on the hide or carucate. Danegeld and *hydagium* are merely two names for the same tax, which was collected from all free tenants, whether holding by knight-service or by socage.

[*Dialogus de Scaccario*, i. 11.—Stubbs, *Constitutional History*, vol. i.] R. L.

DANGEUL, Marquis de Plumart (fl. 1750), was born at Mans, and became a commissioner of the *Cour des Comptes*. He was a relative of Forbonnais, and, like him, devoted himself to the study of the works of the Spanish mercantilists. He translated one of these: *Le Rétablissement des manufactures et du commerce d'Espagne, traduit de l'espagnol de Bernard de Ulloa*, 1753. After this, at the suggestion of Gournay, he, as Turgot did, made himself acquainted with the works of Josiah Tucker, and following Tucker in the lines of free trade and development of commercial enterprise, he wrote his book *Remarques sur les avantages et les désavantages de la France et de la Grande Bretagne par rapport au Commerce et aux autres Sources de la Puissance des États. Traduit de l'Anglois du Chevalier John Nickolls*, Leyde et Paris, Estienne, 1754. This work is pseudonymous; the author admits that he borrowed the title and the introductory sections from Tucker's *Brief Essay on Trade* (1750). In it he expresses his regret at the want of interest in economic questions in France (p. 49), he states the difficult problems of agricultural and financial policy in which his country was involved; he describes the strength of the leisured and the wants of the labouring classes (p. 60), the effects of unequal taxation (p. 43), and the absenteeism of the nobles (p. 64), the centralisation of government, the multitude of holidays, and the low standard of the working classes (p. 25). On the other hand he praises English husbandry as being the true mine of riches (p. 101), and shows the practical and theoretic literary interest taken in English trade (p. 152). Dangeul, however, condemns, like Tucker, the monopoly of the home trade, exercised in England, by corporations and companies (pp. 205-216), as being opposed to the interests of the population and its growth. According to both, competition, entirely unfettered, is most advantageous for a nation's trade, as it diminishes the profits of dealers (p. 253) and assists the introduction of machinery in manufactures. Dangeul is an admirer of Decker's *Proposal* for a single tax on luxuries in lieu of duties and excises (p. 404); he also differs from Forbonnais in one very important point of taxation: he proposes to exempt the absolute necessaries of life, considering that the taxation of these extinguishes the spirit of private property among the poor (pp. 407-409). In 1756 he wrote anonymously, *Examen de la conduite de la Grande Bretagne à l'usage de la Hollande depuis la naissance de la république*, Paris et La Haye, 1756. The writings of Dangeul are interesting in so far as they are evidence of the practical influence of the now undeservedly neglected Dean of Gloucester, Josiah Tucker, the spiritual father of Gournay, Dangeul, Turgot, and also of Adam Smith.

[See Quérard, *La France littéraire*, t. vii. p. 218.—M'Culloch, *Literature of Political Economy*, p. 62.—Morellet, *Mémoires (inédits)*, 1823, t. i. pp. 37-38.—Tucker, *Instructions for Travellers*, 1757,

p. 9.—Quesnay, *Oeuvres*, ed. Oncken, pp. 148, 206 note 2, p. 230 note 2, approving quotation by Voltaire, *Dictionnaire Philosophique*, 1765, art. Agriculture, *Oeuvres Complètes*, 1875, ch. xvii. p. 83.—Le Blanc, *Discours politiques de M. Hume*, Dresde, 1755, t. i. p. 21; t. ii. p. 271.] S. B.

DARG. A Scottish term for a day's work. Cottars were formerly bound to give the labour of a certain number of days to their superior in lieu of rent: these days were called darg-days, *i.e.* days of work.

[*Scottish Dictionary* (Supplement), by John Jamieson, Edinburgh, 1825.] J. E. C. M.

DARIC. Ancient Persian coin of approximately pure gold, first struck about 1516 B.C. by Darius I., bearing the effigy of the king as an archer, but with no inscription. Double darics, struck about the time of the fall of the empire, bear Greek letters or symbols. F. E. A.

DARIEN COMPANY. The originator of this disastrous enterprise was William Paterson, the founder of the Bank of England. His idea was to found a company for colonising the Isthmus of Darien, and conducting overland the trade between the Atlantic and Pacific. By this means, he thought, the whole commerce between Europe and Asia might be diverted from the route round the Cape, and Scotland might supplant Holland as the great emporium for the wealth of the East. Without divulging the details of his scheme, he succeeded in exciting the speculative interest of his countrymen, and a bill to establish the new company was carried through the Scotch Parliament and received the sanction of the Lord High Commissioner on 26th June 1695. The "Company of Scotland trading to Africa and the Indies," was authorised to seize unoccupied territories in Asia, Africa, and America, to plant colonies, construct forts, wage war and conclude treaties; while the king was pledged to obtain reparation from any foreign state which molested the company. The company received a monopoly of the trade with Asia, Africa, and America for thirty-one years, and for twenty-one years their imports, except sugar and tobacco, were to be free from all duties. Scotchmen hastened to invest their scanty savings in the new venture, and £220,000 was actually contributed towards a nominal capital of £400,000. But Scotland was then a poor country, and the financial success of the scheme could only be secured by English support.

The hostility of England, in those days of commercial jealousy, was from the first a certainty. A new trading colony would certainly lead to war with the country whose monopoly was attacked, and the burden of such a war must fall upon England, as Scotland had neither army, nor navy, nor military revenue. England would never go to war to secure to Scotland trading privileges which would be injurious to herself. The English Parliament protested against the scheme, and William III. recalled the commissioner who had given the royal sanction to the act. No English capital was subscribed, and it was even proposed to prosecute the directors of the company.

But English opposition, ascribed to national jealousy, only increased the obstinate determination of the Scotch to carry out the enterprise. In 1698 some 1200 colonists, including Paterson and his wife, sailed from Leith to Darien, where they took formal possession of the country under the name of New Caledonia, concluded treaties with native chieftains, established a representative parliament, and began to fortify New Edinburgh as their capital. The enterprise was almost insane in its rashness. The isthmus had been discovered and crossed by Spaniards nearly two centuries before, and they had only failed to settle there because it was too unhealthy for Europeans to live there. But Spain would never tolerate foreign intruders in the heart of her American provinces, and an expedition was being fitted out to expel the settlers when disease compelled the decimated remnant to sail to New York. Before this terrible news reached Scotland a second expedition had sailed to Darien, where they arrived four months after the departure of the first colonists, to find New Edinburgh a deserted ruin. With the courage of despair the new settlers landed, but their fate was already sealed by dissensions and disease, when the arrival of a Spanish fleet compelled the survivors to surrender and return homewards. The ill-feeling which this ill-starred undertaking excited between England and Scotland, and the risk of similar misunderstandings of the same nature, gave an impulse to the projects of a legislative union between the two countries which was finally effected in 1707.

[The best modern narrative of the Darien Expedition is to be found in Macaulay's *History of England*, vol. iv.] R. L.

DARWINISM is a name sometimes given to the theory put forward in Darwin's *Origin of Species* that the struggle for existence among plants and animals results in natural selection or survival of the fittest varieties. This theory is sometimes spoken of (*e.g.* in Maine's *Popular Government*, p. 37) as if it had been anticipated in Malthus's doctrine of population. But Malthus, though he insists on the fact of the struggle for existence among mankind, had no notion of its altering or improving the human race by causing the fittest varieties to survive. Darwin (*Life and Letters*, vol. i. p. 83), says that the idea of natural selection occurred to him on reading Malthus's *Essay*, not that he found it there.

Herbert Spencer and some writers who have followed him have used the theory as an argument against state interference with private property and industrial competition. They

urge that if the state interferes with the struggle for existence it will hinder natural selection, and thus obstruct the evolution of a superior race; "Now more than ever before," Spencer asserts, "people are doing all they can to further survival of the unfittest" (*Man versus the State*, p. 69). The socialist meets this argument by pointing out that "survival of the fittest" means survival of those who are fittest to undergo a particular struggle, not those who are the absolutely best, and if the struggle is abolished it will not matter whether people are fit for it or not (Sidney Webb, *Contemporary Review*, Dec. 1889, pp. 868, 869). Prof. Huxley says: "It is an error to imagine that evolution signifies a constant tendency to increased perfection" (*Nineteenth Century*, Feb. 1888, p. 163), and even if it were universally admitted that the absolutely best individuals of each generation do come to the top in industrial competition, it might still be questioned whether this results in the survival of the best families. Sir Francis Galton urges very strongly that the Malthusian advice to delay the period of marriage is likely "to bring utter ruin upon the breed of any country where it is followed by the prudent, while the imprudent are left free to disregard it" (*Hereditary Genius*, p. 356). Now the wealthier and therefore presumably "fitter" individuals certainly marry later than the poorer (see MARRIAGE-RATE), and it cannot be said to be proved that the greater mortality among the poor is—or would be if there were no state interference—sufficient to counterbalance their earlier marriages and so to make them less effective continuers of the race than the wealthy.

The subject has not been much discussed by economists of any school, because the analogy between industrial competition and the struggle for existence among the lower animals is too imperfect to be of much service. It is contrary to sound economic traditions to look upon competition as a "private war" (Maine, *Popular Government*, p. 50), and on an improvement in the powers of labour as "sharpening our claws that we may fight our neighbours the more fiercely" (Ritchie, *Darwinism and Politics*, p. 31). Competition is not a struggle for a pre-existing determinate quantity of wealth, in which each man's gain is so much subtracted from the possible gains of all the rest. Though the success of one producer often damages other producers of the same commodity, it almost always benefits the community at large, and makes it not more difficult but easier to obtain the means of existence. Thus it happens that in countries where the industrial powers are most highly developed, individuals who have naturally the least industrial power, *e.g.* the blind, deaf and dumb, and paralytic, find it easier to make a living than they do in more backward countries.

There is a curious anticipation of Herbert Spencer's theory in Joseph Townsend's *Dissertation on the Poor Laws* (1786). "By establishing a community of goods, or rather by giving to the idle and vicious the *first* claim upon the produce of the earth, many of the more prudent, careful, and industrious citizens are straitened in their circumstances and restrained from marriage. The farmer breeds only from the best of all his cattle; but our laws choose rather to preserve the worst, and seem to be anxious lest the breed should fail" (p. 426 in Overstone's *Select Tracts*, "Miscellaneous"). E. C.

DATE OF DRAWING. As a general rule a bill of exchange is dated; the absence of a date does not, however, according to the law of the United Kingdom, make a bill invalid (Bill of Exchange Act § 3 [4*a*]). The holder may, in such a case, insert the true date of drawing, and the bill is then payable accordingly (*ibid.* § 12), the date appearing on the face of the bill being presumed to be the true date of drawing until the contrary is proved; a holder in due course has, in any case, the same rights as if the true date had been inserted (*ibid.* § 13). According to continental law the date is an essential requirement, and an undated document is not available as a bill of exchange (German Codes, 4 [6]; French Code de Commerce, § 110; Italian Codice di Commercio, § 251). If a bill is to operate as from a date previous to the actual issue, it may, according to the law of the United Kingdom, be dated accordingly (ante-dated), and if its operation is to begin as from a subsequent date, that date may be inserted—the bill is then said to be post-dated. It thus becomes possible to evade the stamp duty by post-dating a bill payable on demand, which has the same effect as if the bill had been drawn from the right date payable on the date which appears as the date of issue—in which case an *ad valorem* stamp duty would have been payable. The holder of a post-dated bill cannot, of course, present it for acceptance before the date appearing on its face. If a bill is drawn from a country in which the Greek calendar is used, the date of issue must be taken as the date according to the Greek calendar. Thus a bill drawn in St. Petersburg on the 1st November is treated as drawn on 13th November according to our computation. It is, however, customary to insert the two dates thus: St. Petersburg 1/13 November. E. S.

DAVACH. Ancient measurement of land, N.E. Scotland; equal (average) to four "ploughgates," which amount to 416 Scotch acres, or 528·5 imperial acres.

[Cosmo Innes, *Scotch Legal Antiquities.*] A. D.

DAVANZATI, BERNARDO (1529-1606), born in Florence. This name will always be famous in the history of Italian literature, because, writing in prose, he attained to the same vigour and precision that Dante displayed in poetry. The writings of Davanzati are still

models of style. He undertook to translate Tacitus and to surpass him in conciseness, and asserts that, on an average, a hundred Italian words are required where Tacitus needs a hundred and eight Latin ones, and a French translation a hundred and sixty. Besides his translation of Tacitus, a history of the Reformation in England under Henry VIII., and minor academic essays, two economic writings, for which he merits here a mention, are extant. These are his *Lezione delle monete*, 1582, and his *Notizia dei cambj*, published in 1588, and included in Custodi's *Scrittori Classici*. To judge him correctly it must be considered that he was a contemporary of Scaruffi (1582), of Jean Bodin (1578), and of William Stafford (1581), men who wrote their books half a century before Petty and Locke were born (Petty, 1623-1687; Locke, 1632-1704). Davanzati begins by showing how "barter is a necessary complement of division of labour amongst men and amongst nations"; he then passes on to show how there is easily a "want of coincidence in barter," which calls for a "medium of exchange"; and this must be capable of "subdivision," and be a "store of value." He then goes off upon a historical digression on currencies, and on returning from thence recognises in money "a common measure of value." This leads him to a dissertation on the causes of value in general, in which respect his remarks are also worth mentioning, because he has clearly shown that utility and value are "accidents of things" and functions of the "quantity in which they exist." Proceeding to examples, he remarks "that one single egg was more worth to Count Ugolino in his tower than all the gold of the world," but that, on the other hand, "ten thousand grains of corn are only worth one of gold in the market," and that "water, however necessary for life, is worth nothing, because superabundant." In the siege of Casilino "a rat was sold for 200 florins, and the price could not be called exaggerated, because next day the man who sold it was starved and the man who bought it was still alive." Returning to his argument, he says all the money in a country is worth all the goods, because the one exchanges for the other and nobody wants money for its own sake. Davanzati does not know anything about the rapidity of circulation of money, and only says every country needs a different quantity of money, as different human frames need different quantities of blood. The rest of his treatise is directed against artificial deterioration of money. The mint ought to coin money gratuitously for everybody; and the fear that, if the coins are too good, they should be exported is simply illusory, because they must have been paid for by the exporter. Davanzati insists particularly on the injury the defrauding government is the first to experience when it tampers with the coin. In his essay on exchanges Davanzati goes minutely into the mechanism of exchanges, but he evidently does not suspect the causes of the phenomenon nor its limits. Davanzati was by profession a merchant, and lived a part of his life in France.

[For a criticism of Davanzati, see Travers Twiss, *View of the Progress of Pol. Econ.*, 1847. Lecture i.] M. P.

DAVENANT, Charles, LL.D. (1656-1714), economist and politician, son of Sir William Davenant, the poet, was born in London. He was educated at Cheam Grammar School, Surrey, and in 1671 matriculated at Balliol College, Oxford, but did not then proceed to a degree. After composing, at the age of nineteen, a tragedy under the title of "Circe," which had some slight success, he turned his attention to the law, and appears to have taken the degree of LL.D., but at what university is uncertain. He held the office of commissioner of excise from 1683 to 1689, and represented St. Ives, Cornwall, in the first parliament of James II. His first work of economic interest, *Ways and Means of supplying the War*, was published in 1695. In it he strongly objected to meeting war expenses by borrowing money, and advocated an excise as the best and fairest tax. He sat again in parliament, this time for Great Bedwin, in 1698, continuing to write on economic and political subjects. Under William III. he did not hold office, and criticised the financial policy of the government with some bitterness; but, on the accession of Queen Anne, he returned to official life as secretary to the commission appointed to treat for the union with Scotland. In 1705 he was appointed inspector-general of exports and imports, which office he held until his death.

As an economist, Davenant must on the whole be classed as an adherent of the mercantile theory. In opposition to the bullionists he points out that an energetic people with good seaports and a soil fertile in variety of commodities, can easily exchange its products for as much gold and silver as it may require. "Money," he says, "is the servant of trade—at bottom no more than the counters with which men in their dealings have been accustomed to reckon." He seems to have considered, however, that the possessors of money in specie were in a position of advantage compared with the possessors, and would-be sellers of commodities. "Those who stand possessed of the ready money have, in all times and all countries, given the law." Especially is this the case with perishable commodities, and articles of luxury, which should not be bought by any nation to a large amount, except for the purpose of being re-sold. On the last ground he strongly supported the East India Company in the controversies which raged about 1697 on the

subject of the importation of East India goods, and opposed the act which was passed in the supposed interest of English manufacturers, forbidding the wearing or use of Indian silks and muslins. Such a measure would only benefit the French silk trade and encourage smuggling. "The natural way of promoting the woollen manufacture is not to force its consumption at home, but by wholesome laws to contrive that it may be wrought cheaply in England, which will enable us to command the markets abroad." Europe was foolish enough to be ready to pay for luxuries from India; much wealth could be gained by the nation which would act as the go-between; and for England to refuse to reap the harvest would be merely to leave it to the Dutch.

In his earlier economic period Davenant shows distinct tendencies towards what might almost be called a free-trade position. "Trade is in its nature free, finds its own channel, and best directeth its own course, and all laws to give it rules and directions, and to limit and circumscribe it, may serve the particular ends of private men, but are seldom advantageous to the public. . . . The various products of different soils and countries is an indication that Providence intended they should be helpful to each other." In the works, however, which he published after his return to official employment, he did not venture to disturb current economic ideas, devoting himself to carrying on the statistical work of Sir William Petty and Mr. Gregory King, and attempting by an elaborate investigation to ascertain the precise position of England in regard to the balance of trade (see BALANCE OF TRADE, HISTORY OF THE THEORY). His views on taxation have been already alluded to. He thought that the incidence of taxation should be proportional to the tax-payer's ability to pay, and that taxes should bear chiefly on consumers of luxuries. He thought that "all taxes whatsoever were, in their last resort, a charge upon land." Trade with uncivilised countries such as Africa was, he thought, best carried on by a monopolistic corporation (see FOREIGN TRADE, REGULATION OF). As regards the labour question, he strongly advocated the compulsory employment of the able-bodied poor in manufactures, as a means to cheap production and the consequent command of foreign markets. Davenant's chief works were—

An Essay on the Ways and Means of Supplying the War, London, 1695.—*An Essay on the East India Trade*, London, 1697.—*Two Discourses on the Public Revenues and Trade of England*, London, 1698.—*An Essay on the probable means of making the people gainers in the balance of Trade*, London, 1699.—*A Discourse on Grants and Resumptions.—Essays on the Balance of Power*, London, 1701.—*A Picture of a modern Whig*, London, 1701.—*Essays on Peace at Home and War Abroad*, London, 1704.—*Reflections on the Constitution and Management of the Trade to Africa*, London, 1709.—*Two Reports to the Commissioners for taking the Public Accounts*, London, 1712 and 1715. A collected edition of his works, edited by Sir C. Whitworth, was published at London in 1771.

[Stephen's *Dictionary of National Biography*, London, 1888.—Conrad, *Handwörterbuch der Staatswissenschaften*, Jena, 1888.—Guillaumin and Coquelin, *Dictionnaire d'Économie Politique*, Paris, 1858, and heading "East India Trade" in British Museum Catalogue.] A. H.

Davenant is perhaps best known to most readers by his employment of the estimate made by GREGORY KING (*q.v.*) of the effect of deficiency in supply on augmentation of price. The passage in which this is mentioned is as follows:

"It is observed that but one-tenth the defect in the harvest may raise the price three-tenths, and when we have but half our crop of wheat, which now and then happens, the remainder is spun out by thrift and good management, and eked out by the use of other grain; but this will not do for above one year, and would be a small help in the succession of two or three unseasonable harvests. For the scarcity even of one year is very destructive, in which many of the poorest sort perish, either for want of sufficient food or by unwholesome diet.

"We take it that a defect in the harvest may raise the price of corn in the following proportions:—

Defect.		Above the common rate.
1 tenth	raises the price	3 tenths
2 tenths		8 tenths
3 tenths		1·6 tenths
4 tenths		2·8 tenths
5 tenths		4·5 tenths

So that when corn rises to treble the common rate, it may be presumed that we want above one-third of the common produce; and if we should want five-tenths or half the common produce, the price would rise to near five times the common rate" (*D'Avenant*, vol. ii. pp. 224, 225).

DAVIES, DAVID, D.D. (*d.* 1819?), graduated at Oxford, and was appointed rector of Barkham, Berkshire. When in 1775 and 1785 parliament ordered returns to be made of the poor rates throughout the kingdom, no inquiry was thought necessary as regards the actual circumstances of poor families. To remedy this omission, Davies collected budgets of labouring families in his own parish about Easter 1787. Of these accounts an abstract was printed; many copies were distributed with the help of friends throughout England, Wales, and Scotland. The valuable information collected in this manner is tabulated in the following work, and furnishes minute particulars as to the wages, food, etc., of agricultural labourers. The author offers various suggestions for the encouragement of thrift, with recommendations for rating wages by statute and according to the price of bread.

The Case of Labourers in Husbandry stated and

considered, in three parts: Part I. A View of their Distressed Condition. Part II. The Principal Causes of their Growing Distress and Number, and of the Consequent Increase of the Poor-Rate. Part III. Means of Relief Proposed. With an Appendix containing a collection of accounts showing the earnings and expenses of Labouring families in different parts of the Kingdom. Bath, 1795, 4to.

[M'Culloch, *Literature of Political Economy*, 1845, p. 285.—Sir F. M. Eden, *State of the Poor*, 1797, vol. iii.—A. Toynbee, *Industrial Revolution.*] H. R. T.

DÁVILA, EL PADRE BÁUTISTA (17th century). In his *Resúmen de los medios prácticos para el general alivio de la Monarquia* (A short account of the practical means of the general Relief of the Monarchy), printed in 1651, Dávila advocates a single and progressive poll-tax. He thus aims to remedy the frightful state to which Spain had been brought by the bad administration of the "Rentas Reales" and by the vexatious exactions and dishonesty of the collectors. He also deals with the problem of the debased currency.

[Colmeiro's *Biblioteca de los Economistas Españoles* and *Historia de la Economia Politica en España* (vol. ii. pp. 494, 575, 576).] E. Ca.

DÁVILA Y LUGO, DON FRANCISCO (17th century). Dávila's *Desengaños y Replicas á las Proposiciones de Gerardo Basso* (Disproof of and Reply to the proposals of G. B.), Madrid 1632, is addressed to Philip IV., and strongly remonstrates against the adoption of a plan suggested by a Milanese writer, Gerardo Basso, who in his *Arbitrios y Discursos Políticos* (Madrid, 1627) had suggested the recoinage of the existing *Vellon*, debased small coins of silver and copper, which made up almost the whole of the existing currency in Spain. This recoinage was to be effected at the joint cost of the state and of the public, and reissued at a nominal value greatly superior to the intrinsic value. Dávila explains the objections to the tampering with the value of the currency and insists that the latter must be brought into strict correspondence with the currency of the neighbouring states. All monetary exchanges ought to be regulated according to a book of rates, which he considers that he alone is qualified to compile, and which must be based on the real metallic correspondence between the national and foreign coins in circulation.

[Colmeiro's *Biblioteca de los Economistas Españoles.*] E. Ca.

DAY, DAY WORK, AND DIET. A term given by the court at the prayer of the demandant or plaintiff, especially at the Exchequer for accountants of the crown to render their accounts (Dialogus, ii. 4). Also *Days of grace* were certain days allowed to the acceptor of a bill or to the maker of a note in which to make payment in extension of the term specified in the bill or note. They were so called because at first allowed only as a matter of favour perhaps originally through the mediation of the church, but this custom of the merchants has long been recognised by the law. Also a year-and-a-day.

In another sense, one day's entertainment or reception in lieu of service and rent, as in *Domesday Book*, where many such fee-farm rents are mentioned usually reserved to the king in so many days' or nights' provision, *e.g.* "so much honey as was sufficient for the king's family for half a day, and as much as was enough for a whole day" (Spelm. *Domesday*).

Also an allowance or diet for officers of state calculated according to the expenses of a day's journey or sojourn. A table of diets for the sheriffs of the English counties according to the number of days' journeys completed in attending at the exchequer at Westminster or at York is preserved in an ancient record (*Red Book of Exchequer*, fol. 14). Especially used of ambassadors or other agents of the crown (Audit Office Declared Accts., "Ambassadors," "Agents"). Also of soldiers, labourers, etc. paid by the crown (Q. R. Wardrobe Accounts, "Army," etc.) Diet is also used of a day's journey, formerly calculated as twenty miles, presumably for a horseman.

Also in agriculture of the day's work of one ploughman or cart, namely one "journey" (*journée*). Hence sometimes used as a specific quantity in grants of land (*Cart. Reading*, fol. 90d.) The extent of land ploughed in a day was variously computed, but was commonly fixed at four perches. In another sense a day-work was a recognised prædial service rendered by the villeins in most manors to the lord, and these "opera diurna" are enumerated in many custumals, and often in connection with an allowance of food—"Et debent facere LX opera diurna, ut supra, in gardino, vel alibi, ut supra, capiendo LXV panes, ut supra." (*Cust. of Battle*, p. 10).

[Spelman, *Gloss.*—Cowel, *Interpr.*—Norden's *Surveyors' Dialogue.—Notes and Queries* (3rd series), iii. 512.—*Custumal of Battle Abbey* (Camden Soc.)] H. Ha.

DAYS OF GRACE. These are the days which, in the case of bills of exchange, not being payable on demand, are added to the time of payment appearing on the face of the instrument. According to the law of the United Kingdom there are three such days of grace (see BILL OF EXCHANGE, LAW OF); but a bill may (by the use of the words "without grace" or some similar expression) stipulate that the day appearing on its face is to be the final due date. In most continental countries "days of grace," in the sense indicated above, do not exist; the holder *may* take out protest without waiting for any additional days; but he does not lose his right of recourse, if the presentation or protest is deferred for a certain

time (two days according to the German and Italian codes, §§ 41 and 296 ; one day according to the French code, § 162). These additional days, which may be called "days of grace at the holder's option" are convenient, as they enable the holder to exercise some leniency in favour of acceptors who, by reason of some accident, are not in possession of liquid funds on the exact day ; but the English days of grace have no practical object whatever, and only add an unnecessary complication in the computation of the time of payment. E. S.

DEAD FREIGHT. Compensation paid by the freighter of a whole ship for space remaining unoccupied when the cargo is not a full one.

A. D.

DEADLY, WARRANDICE AGAINST ALL (Scot.) Warranty against all mortals (*contra omnes mortales*). (See WARRANDICE.) A. D.

DEAD RENT. A rent reserved in a mining lease and payable whether the mine be worked or not. The object of such reservation is to secure the working of the mine. In some leases the dead rent and the royalty (see ROYALTY) are made payable cumulatively ; in others the dead rent merges in the royalty actually paid (*The Law of Mines*, by R. F. MacSwinney, London, 1884).

[As regards the amount and economic effects of dead rents, see *Mining Royalties*, by W. R. Sorley, London, 1889, and *The Reports of the Royal Commission on Mining Royalties*, c. 6195 of 1890, c. 6331 and c. 6529 of 1891.] J. E. C. M.

DEAD'S PART (Scot.) The portion of a man's free movable estate which he is at liberty at common law to bequeath by will ; that is, if he have neither wife nor child, the whole ; if he have either wife or child, one half ; if he have both wife and child, one third. In other words, the wife is entitled to one equal share ; the child or the children jointly to another equal share ; the testator is limited to one equal share, the deceased's share, or "dead's part." This common-law scheme of distribution may be modified by ante-nuptial contract of marriage (see MARRIAGE SETTLEMENT), or, after the marriage, by formal renunciation of their legal rights by the wife or children respectively. A. D.

DEADWEIGHT ANNUITY. A terminable annuity the creation of which was sanctioned in 1822, in lieu of certain naval and military pensions payable out of the public funds. The phrase was originally employed by Cobbett.

The distressed condition of agriculture in 1822 led Lord Londonderry's government to propose various measures for the lessening of the public burdens. Amongst them was a scheme for the creation of an annuity of £2,800,000, for a period of forty-five years, in lieu of the "dead expense" or "dead weight" of the naval and military pensions and half-pay amounting altogether to about £5,000,000 a year, which had arisen out of the recent wars. It was claimed that the government were justified in distributing this charge equally over a period of years, instead of awaiting the gradual extinction of the burden by the death of the pensioners. The scheme was opposed by Ricardo, amongst others, on the ground that it was a covert attack upon the sinking fund, and a relieving of the then taxpayers at the expense of posterity, but it eventually became law (3 Geo. IV. c. 51). In 1823, the Bank of England agreed to purchase £585,740, part of the proposed annuity, paying for it the sum of £13,089,419, spread over the six years 1823-28 (4 Geo. IV. c. 22), but this was the only sale effected, and the original act was repealed in 1828 (9 Geo. IV. c. 79) on the unanimous recommendation of the House of Commons ; thus the whole of the annuity, except the £585,740 per annum sold to the Bank of England, was cancelled. In July 1839 the Bank of England invited tenders for the purchase of their annuity, with a view to counteract a long-continued drain upon the stock of bullion, but the biddings fell short of the minimum advertised price, and the annuity continued to be paid to the Bank until 1867, when it expired.

[In addition to the Acts above named, Hansard, 2nd Series, vol. vii. pp. 164, 280, 316, 737, 1319, 1396, vol. xix. p. 646 ; Tooke's *History of Prices*, vol. iii. 88, 100-1, vol. iv. 333 ; and the *Report* of the Select Committee on Banks of Issue (No. 602 of 1840), may be consulted.] T. H. E.

DEALER (STOCK EXCHANGE). A dealer is a man who, in concert with others, makes what is called a market. He stands ready to buy or sell certain stocks, or shares, or bonds and, when a stockbroker approaches him with a demand for a quotation, the dealer (or jobber, as he is still called in and about the stock exchange) replies by mentioning two prices, the lower being that at which he will buy, and the higher that at which he will sell. For instance, when quoting the price of consols, he offers to buy each £100 stock at 98, or to sell at 98⅛. There is no legal obligation upon him to quote prices or to deal after quotation, but it is part of the etiquette of the stock exchange, which is quite as much a club as a market, that the dealer should follow up his quotation by buying or selling as the case may be up to the value of £1000. Indeed, were a jobber to give a quotation and then refuse to deal at either price named in the quotation, he would fall into disrepute, and perhaps be reported to the Stock Exchange Committee for General Purposes. In theory the dealer is supposed to be ignorant of and indifferent to the desire of the broker who accosts him—that is, he is supposed to be ready to sell or to buy—but in practice a shifty dealer will try to delay giving his quotation until he has discovered, or thinks he has discovered, the intentions of the person who

has come to him. If he thinks that the latter wishes to buy he raises his selling price; if he has reason to believe that the party wishes to sell, he quotes as low a buying price as possible, unless the state of his book makes it his interest to deal freely. Dealers sometimes transact business among themselves, for at the end of a day it may happen that dealer A has contracted to buy more stock than he can pay for, while dealer B has, on the other hand, contracted to sell more of the same stock than he can possibly deliver. Then A and B come together, and each relieves the pressure upon the other dealer's "book." In short, they institute a kind of clearing-house among themselves, writing off liabilities to sell against liabilities to buy. It need not be said that the dealers who compose a market have many opportunities for discovering facts which may lead them to a correct conclusion as to the drift of prices in the market. At the end of one week they will discover that the public has been absorbing a certain stock so freely as to limit the supply on the market. A week or two later they will have found that the tide has turned, and once again they are enabled to take measures. The dealer is a product of division of labour. He gives his time and attention exclusively to the consideration of one or two securities, and gradually accumulates in his own mind a record of the forces which go to raise or depress that group of securities in the market. He also preserves a kind of continuity, and acts as the middle link between the buyer of a stock who may be at Penzance, and the seller who may be at Middlesbrough. If it were not for the dealer or jobber, a man with stocks or shares to sell would have to run about, or employ a broker to run about, from place to place, offering these shares and remaining, perhaps, in the dark as to what is a good average market price. Thus the dealer forms the nucleus of a perpetual fair, and whereas a horse fair, for example, is often only an annual function, persons in the neighbourhood of the town in which it is held being almost compelled to keep their cattle until a fair takes place, the attendance of a concourse of dealers on the stock exchange makes it always possible to buy or sell the stocks in which they are concerned. In active times the price quoted by a dealer is usually more "close"—that is, the interval between the buying and selling quotation is narrow—whereas in dull times the dealer hesitates to offer anything like a middling quotation for fear of inability to cover or "undo" his bargain by a resale or a repurchase at such a price as would leave the dealer a turn or profit. A. E.

DEARNESS, Artificial. When action is consciously and deliberately directed to enhance the price of some commodity in some market above the competitive level, any resulting dearness may be called artificial.

We are not here to consider natural monopolies, for the dearness produced by these may be regarded as in a sense normal; and the end of the monopolist is not dearness, but high net profit, which may in some circumstances be produced by cheapness.

Nor can we conveniently consider under this head such artificial monopolies as copyright in books, or works of art, or patents for inventions. Dearness so produced is in a sense artificial, as deliberately created by the state. But the price of such things is not on the average higher than is necessary to induce the author or the inventor to work for the community.

The protection of home products by duties on imports may produce artificial dearness, but is more conveniently considered separately under the head Protection.

The cases in which *demand* can be artificially created are not important. Laws such as the English law in the reign of Elizabeth for the eating of fish on Wednesdays and Fridays, and the charitable endeavours of leaders of fashion to foster local manufactures, *e.g.* Irish poplins, have had this end and possibly this effect. The effect of false rumours is generally transitory and followed by an equivalent or greater reaction. But the issue of misleading reports and fraudulent balance sheets may maintain the shares of banks and companies at an artificial level for years, as in the case of the city of Glasgow Bank (1878). Again a government may use its power as a purchaser to enhance the price of commodities for the benefit of a section of its subjects, or for the profit of influential persons. The laws passed in 1878 and 1890, to regulate the purchase of silver for currency purposes in the United States, had this effect if not this object.

Artificial dearness can only be permanent when the individual, or association, or public authority engaged in enhancing the price has either practical control over the most important of all possible sources of *supply*, and thus can limit the output, or has absolute control over the market of *demand*.

Thus the East India Company and, in later days, the Indian government, had practical control over the sources of supply of a specially high quality of opium. We are told that the Company used this power in a very arbitrary way to limit the supply of their opium (Adam Smith, bk. iv. ch. vii.). And the Indian government placed this restriction on a regular basis with such profitable results that a monopoly revenue of some seven millions sterling was drawn from this source (see Opium). But the market was not under English control, and a war with China was necessary in order to maintain it. The rate of profit also diminished through increased consumption of Chinese opium, which, although inferior, was a competing substitute.

The Dutch East India Company had long after 1607 sovereign control over the Molucca Islands, once almost the only sources of supply for certain highly valued spices. Discovering by experience that a small increase of supply creates a more than proportional fall in the price of such commodities, they rigorously limited the supply by destroying a part of the plants in their own islands, and by extirpating as far as possible the clove and the nutmeg in the islands where they had no settlements (Adam Smith, *l.c.*) In abundant seasons they also destroyed a large part of their own produce. In modern times the monopoly of the spice trade is no longer in the hands of any nation.

Mines and salt mines have been commonly regarded in Europe as state monopolies. Until modern times the price has been thus maintained at an artificial level. Where the whole sources of supply are, as in this case, collected in one hand and foreign competition is excluded, it is not necessary to restrict the output. The price can be fixed, and the demand at that price will determine the output.

Somewhat similar are the state monopolies of matches, tobacco, etc. which exist in France and other European countries. They are highly profitable to the state, but the consumer has to put up with inferior quality. More convenient in the latter respect are customs duties, supplemented by equivalent excise, or levied on commodities not produced at home. These also produce artificial dearness for the profit of the state. But the rate of taxation does not measure the increase in price. It may be less or more according to the law which the production of the commodity obeys (see DIMINISHING RETURNS, and INCREASING RETURNS). Export duties can only be levied with permanent advantage to the state when a country has a natural monopoly of a commodity, or produces it under exceptional advantages. So with English wool in the thirteenth and fourteenth centuries. Such duties result in artificial dearness of the commodity, which is generally accompanied by a reduced demand and may ultimately destroy the trade. A bounty on exports has the opposite effect, and raises the price for a time at least to the home consumer.

A trading body, not fortified in a monopoly by the power of a state, can rarely obtain such control over all the sources of supply of any commodity in any market, as may be possessed by a public authority or a chartered company. The attempt has been made in recent times by great associations of capitalists, trading and producing bodies known as syndicates and trusts. The Standard Oil Trust in the United States was formed in 1881, to control three-quarters of the total petroleum refining power of the States, and exercised also, as it is alleged, influence over the output of crude petroleum, and the carrying corporations. It is not suggested that the trust enhanced the price of refined petroleum above its previous level, but the considerable profits of the trust suggest that it partly prevented a natural decline. The Sugar Refining Company, which united under one control the chief sugar refining establishments in the States, is admitted to have raised the price of refined sugar two cents a pound. But in spite of their overwhelming power, neither of these two great associations was able to control the whole of the producing power and effectually keep down the output. Though protected in their own country they could not control the foreign trade, and there remained even at home a small body of outside competitors and a vast power of potential competition which might at any time, if tempted by exaggerated profits, have come into the field. In the case of the Cotton Bagging Trust, a syndicate of consumers, known as the Farmers' Alliance, was formed in opposition. The moderation with which trusts have been generally conducted has not saved them from unpopularity. In some States such combinations have been pronounced illegal, and attempts have been made to crush them by legislation.

One of the best conceived of such schemes was the English Salt Union formed in 1888, to control the supply of salt from the English mines. The effect of their action was immediately seen in the decline of English exports of salt from 898,000 tons in 1888 to 667,000 tons in 1889, with a rise in values from £486,000 to £539,000, thus illustrating a well-known law which is the strength of those who attempt to forestall necessaries. In September 1888 the price of lump salt delivered free in Cambridge was 26s. a ton, in July 1889, 48s., July 1890, 52s., July 1891, 36s. The company paid in the first year 10 per cent on its ordinary shares, in 1890, 7 per cent, and in the first half of 1891, 5 per cent only. The 7 per cent preference shares in October 1891 stood at a discount. Excellent as are the sources of supply controlled by this company, necessary and universal as is the use of salt, its bulk comparatively small and the burden per head light, the rise in price cannot fail to affect the export trade, and the greater the rise in price the greater the inducement to competition, which for the great export trade is serious and even in England may become active. The difficulties of a trust increase with its success and with the duration of its success (on the whole subject, see a Foreign Office Report, 1890, c. 5896-32).

Even more hopeless is the task when the attempt is made to enhance price over a considerable period, with no control over the output, by buying up the stock in the market. The copper syndicate started in France towards the end of 1887, with a capital of 4 millions sterling, and the resources of the

Comptoir d'Escompte at its back. Copper was then and had long stood at about £40 a ton. Demand for copper was reviving. The operations of the syndicate raised copper to £85 in January 1888, and to £99 a ton in September of the same year. They had contracts with all chief copper-producing companies binding the syndicate to take over all their copper up to a certain amount at a certain price. But they had not the power to keep down the output, which increased from 224,000 tons in 1887 to 262,000 tons in 1888.

During the period the visible supply increased from 45,000 tons to 118,000 tons. Meanwhile consumers were minimising their purchases. Copper is not a necessary of life, and in March 1889, when the resources of the society and of the Comptoir d'Escompte were exhausted, the society itself held 130,000 tons.

In April 1889 the price of copper was back at £40. As a speculative venture the syndicate had very favourable prospects. But its ill-regulated attempt to artificially enhance and maintain the price failed, through want of power to keep down the output in proportion to the reduced consumption.

In the middle ages local markets were sometimes so far isolated by difficulties of communication and carriage that a very considerable difference in price would be long in attracting supplies from other markets. Such exceptional markets may occasionally have been looted by speculators, whose resources were large in proportion to the market. In dealing with necessaries, it would be enough to buy up a large part of the available supply, to withhold, export at a loss, or even destroy a part, in order to realise substantial profits (see Jevons, *Theory of Political Economy*, 1879, 167 *seq.*, and the estimate there quoted, which, though resting on an insufficient inductive basis, is the guess of a shrewd man of much experience). Such events may have occurred to justify the popular hatred of Forestallers and Regrators and *Accaparreurs*, and the legislation on the subject from the *lex Julia de Annona* downwards. But the enterprise could rarely be attempted with success, and Adam Smith (bk. iv. ch. v.) did good service in pointing out the useful function of corn dealers as mitigating the severity of a scarcity, and in condemning all such legislation. It is very difficult to believe that a *pacte de Famine*, in eighteenth-century France, can have been successful, unless by the aid of legislation restrictive of trade.

The modern market for necessaries is co-extensive with the world. The modern harvest continues from January to December. No combination of capitalists has yet arisen which could even threaten an artificial scarcity of food, unless in a strictly protected country, or a country where modern means of communication have not been developed. On the other hand, to produce in a sensitive market a transitory enhancement of price does not require great resources. The device is familiar on the stock exchange and the produce market. But to make this manœuvre profitable the influence of example is necessary. When a leading financier buys largely, small speculators rush in to profit by the boom, and the master may unload at the expense of his imitators. If this expectation is not fulfilled the market must be depressed by the operator's sales, as much as it was raised by his purchases. On the whole, such fluctuations tend to depress average prices by discouraging legitimate purchase for consumption or investment, though they may be profitable to individuals.

At an exceptional conjuncture, when the supply of some necessary runs low, the action of some corner or ring may stimulate normal demand into frenzy. This was the case in New York in September 1869, when £22,000,000 sterling in gold were locked up in the treasury and the available market supply fell to £3,000,000 sterling. The currency being inconvertible, this supply might have been sufficient for normal needs. But it was easy for a few speculators to control the whole, and exact a ruinous price from purchasers whose needs were pressing. A ring was formed and in one day the premium on gold was forced from 40 to 60 per cent. The excitement was so great and the dealings so large that the gold clearing-house was unequal to the strain. The further rise of gold was only stopped by government sales of gold. It is, however, easier to create such movements than to profit by them. The means taken on this occasion by the conspirators to protect themselves are said to have been outside the limits of legitimate trade.

When speculators are rashly *bearing* a stock of which the real supply is small, a corner may sometimes be formed to lock up the whole, and prices are then forced up to an abnormal level, for the bears cannot find stock to deliver on settling day (see Backwardation; Corner; Ring).

The so-called cotton corner of 1889, on the collapse of which (September 30th) "Septembers" fell thirty points in one day, was rather a case of exaggerated speculation for the rise than a genuine case of artificial dearness.

The mutual relations of individuals are becoming less important to economics than the mutual relations of great associations. The labour market has been lately swayed by great combinations, not unlike those which attempt to control the production of commodities. The object of their action is to enhance the rate of wages, and in so far any dearness of labour produced may be termed artificial. But bargaining is one of the normal functions of the economic man, and the desire to obtain the

best terms possible one of the ordinary forces that determine prices. It seems best therefore to confine the term, in the labour market, to any dearness that may be produced by the exclusion of certain men from certain labour markets, by limitation of apprenticeship, or by intimidation of outside competition. The attempt is subject to the difficulties already mentioned. The greater the artificial enhancement of price the greater the attraction to outside competition, whether of man with man, or producer with producer, or port with port, or country with country.

The various modes in which it has been attempted to enhance price artificially have been surveyed, according as the enhancement has been permanent, temporary, or what may be called momentary. The success of the attempt depends upon the nature of the commodity dealt with, the extent of the market of supply, and of demand, and the character of the resources commanded. Price may be momentarily enhanced by taking advantage of peculiar circumstances of the market. It may be temporarily enhanced by buying up the stock, but such attempts cannot be successful unless it is possible to exclude extraneous supplies, or unless such supplies are by the circumstances of the case excluded. If this be so, in the case of necessaries there is hardly any limit to the possible enhancement of price. In other commodities consumption is minimised and substitutes employed. Permanent enhancement requires either a practical monopoly of the sources of supply, which is apt to break down if the strain be severe, or such command over a market of demand as only a government can exercise. The safeguard of the community against the tyranny of great capitals rests in the practical difficulty of keeping great voluntary combinations together, and of finding a commodity indispensable, without substitutes, of which the sources of supply are absolutely limited.

[Adam Smith, bk. iv. ch. v.—Cournot, *Principes Mathématiques*, ch. i. § 2.—John Stuart Mill, *Principles of Political Economy*, bk. iv. ch. ii. § 5.—Roscher, *Political Economy*, bk. ii. ch. ii. § 108.—Sidgwick, *Principles of Political Economy*, bk. ii. ch. ii. § 4, § 7; bk. ii. ch. x. See also CORNER; CUSTOMS; EXCISE; FORESTALLERS AND REGRATORS; MONOPOLIES; PROTECTION; RING; SYNDICATE; TRADE UNIONS; TRUSTS.]

S. M. L.

DEARTH. See FAMINE.

DEATH DUTIES. The collection of a tax on the occasion of the transference of property from the dead to the living has been made a means of raising public revenue from very early times. Adam Smith cites as examples the *vicesima hereditatum* of the Romans, the duties payable by heirs under the feudal law, and the Dutch tax on successions. Duties of this class now rank, with common consent, amongst the most legitimate and least detrimental to individual interests of all descriptions of taxation.

Adam Smith discusses the arguments for and against these duties at considerable length (*Wealth of Nations*, bk. v. ch. iii.), and points out that they are, or may be made, "perfectly clear and certain," "the time of payment is . . . sufficiently convenient," and "they are levied at very little expense." On the other hand he considered them unequal, on the ground that the frequency of transference was not always the same in property of equal value, and he also thought that so far as they diminish the capital value of property they "tend to diminish the funds destined for the maintenance of productive labour." The latter point was emphasised by Fawcett (*Manual Polit. Econ.*, bk. iv. ch. ii.), but Mill (*Principles*, bk. v. ch. ii. § 7) attached no importance to the objection in a wealthy country. He considered that "the amount which would be derived from a very high legacy duty in each year is but a small proportion of the annual increase of capital in such a country; and its abstraction would but make room for saving to an equivalent amount." Prof. Sidgwick adopts a similar view, and says that the bad effect of such duties "is not at all likely to be at all equal in proportion to the similar effect that would be produced by extra taxes on income; in fact, the limits of taxation on inheritances will be practically determined for the financier rather by the danger of evasion through *donationes inter vivos* than by the danger of checking industry and thrift." (*Principles*, bk. iii. ch. viii. § 11).

Mill regarded legacy and inheritance duties as taxes in respect of which it was both expedient and just that the principle of graduation should be adopted (*Principles*, bk. v. ch. ii. § 3), but Prof. Nicholson contests this view and expresses the opinion that "graduated taxation, even in the modified form proposed by Mill, would tend to check production on a large scale" (*Encyclopædia Britannica*, art. "Taxation"). The levy of a larger percentage on a larger sum has, however, received distinct recognition in the scale of death duties in force in the United Kingdom.

Prof. Nicholson (*ibidem*) says that "it is obvious as regards incidence that taxes of this class are the most direct of all taxes, in the sense that they cannot be transferred to other persons by the beneficiaries"; to which he adds, that the principal difficulties connected with them arise in connection with the canon of equality of taxation.

The death duties levied in the United Kingdom date from the year 1694, when a fixed duty of 5s. each was imposed on all probates of wills and letters of administration. This duty was increased four years later to 10s.

but in both cases the charge was more analogous to the stamp duties levied on instruments of a legal character than to the death duties as we now know them. In 1779 Lord North, taking note of the observations of Adam Smith, proposed that the charges should vary according to the amount of the estate, the maximum duty to be a fixed sum £2 : 10s. on each estate of £300 and upwards. In the following year these charges were supplemented by a graduated duty on receipts given for legacies. Frequent changes in the scale of probate duties were made between 1779 and 1815, the maximum charge being gradually augmented, and in the latter year a distinction was drawn between the duties levied on testate and intestate estates. During the same period the legacy duties were also increased, and their payment made more secure. The most important alterations were those proposed by Pitt in 1796, when executors were made responsible for the payment of the duty, and the charge was levied at different rates varying according to the consanguinity of the legatee to the testator. These rates were enlarged in 1804 and again in 1805. No complete record of the yield of the death duties exists prior to the year last named, but they then produced £495,000, a sum which had increased to £882,000 in 1810, and to £1,298,000 in 1815.

In 1842 the Irish probate duties were brought up to the level of those levied in Great Britain, but, with this exception, the death duties remained unaltered for thirty-eight years. The amount they produced, however, steadily increased, rising from £1,696,000 in 1820, to £2,189,000 in 1830, £2,192,000 in 1840, and to £2,343,000 in 1850.

In 1796, Pitt had endeavoured unsuccessfully to obtain a tax on successions to landed property, analogous to that on legacies of personal estate, and it was reserved for Mr. Gladstone, in 1853, to bring within the scope of the duties all successions to property, by reason of death, whether the property was real or personal, and whatever the nature of the title to receive it. Mr. Gladstone found it essential to make considerable differences between the new duties and the old ones, alike in the amount to be paid and the manner of payment, and his estimate of the produce of the duties he imposed proved excessive, their yield never having amounted to one-half of the sum, £2,000,000, which he thought they would realise. Some slight modifications of the death duties were made in 1859 and in 1864, and six years later Mr. Lowe proposed, but without success, to so rearrange them as to secure an additional £1,020,000 a year, but it was not until 1880 that any substantial changes were made. Meanwhile the aggregate produce had risen from £2,547,000 in 1853 to £3,564,000 in 1860, £4,953,000, in 1870, and to £6,400,000 in 1879, figures which strikingly exemplify the growth of the national wealth.

In 1880, Sir Stafford Northcote revised the scale of probate duties, and a year later Mr. Gladstone followed his example and, at the same time, abolished the distinction between the duties payable in respect of testate and intestate successions, transferred the duty from the probate or letters of administration themselves to a detailed affidavit of value to be lodged with the application for representation, and repealed the 1 per cent legacy or succession duty payable by direct lineals wherever the increased probate duty was paid. On the same occasion Mr. Gladstone afforded relief to small estates not exceeding £300, alike in the amount to be paid and the mode of payment, whilst a new duty, styled the "account duty," was imposed as an equivalent to the probate duty in certain circumstances in which the payment of the latter was avoided. The yield in the year 1880-81, under Sir Stafford Northcote's scheme, was £6,826,000, and in 1882-83, when Mr. Gladstone's proposals first took full effect, the receipts were £7,438,000. Five years later the produce had risen to £8,242,000. In 1888 Mr. Goschen proposed that the exchequer should surrender one moiety of the probate duty for the benefit of various local authorities, and he accompanied this proposal by an addition of a ½ per cent to the 1 per cent rate of succession duty and of 1½ per cent to the higher rates. In 1889 he imposed a new duty, analogous to the probate and succession duties, which was termed the "estate duty" by reason of its limitation to estates or successions of £10,000 and upwards.

In 1894 Sir William Harcourt in his Budget of that year, rearranged the system of the Death Duties into which he introduced the principle of graduation. A new estate duty was imposed to take the place of probate and account duty and of the former estate duty. The new duty was levied on the principal value of all settled property passing at death, at rates varying from 1 per cent on property from £100 to £500 in value, to 8 per cent on estates valued at over £1,000,000. The net produce of this tax in 1901-2 amounted to £13,908,490, legacy duty yielded £3,133,588, and other duties, including succession duty, £1,308,136, brought up the total proceeds of the death duties to £18,513,714. In 1907 Mr. Asquith raised the Estate Duties, and in 1910 Mr. Lloyd George passed his Finance Act, by which the rates were considerably increased. The Act of 1914 proposes still further changes.

It will now be convenient to describe, under their respective heads, the death duties at present levied in the United Kingdom.

(1) *Estate Duty.*—This duty, imposed by Sir William Harcourt, as stated above, took the place of the Probate, Administrative and

Inventory Duties, the Account Duty and Estate Duty, which had been in force up to that time. It requires that prior to the issue of any grant of probate or letters of administration of the estate of any deceased person, the applicant should deliver an affidavit containing detailed particulars of the value and description of all the property belonging to the deceased which the executor or administrator has the right to recover *virtute officii*. All property must be included, whether real or personal, settled or not settled. Leaseholds are personal property and should also be entered in the affidavit. Debts payable out of the estate, together with reasonable funeral expenses, may be deducted from the assets, and the duty is charged upon the principal amount of the estate according to the following scale imposed by Mr. Lloyd George's Budget, 1910.

Principal Value of the Estate.					Rate of Duty.
Above	£100	and not above	£500		£1 per cent
,,	500	,, ,,	1,000		2 ,,
,,	1,000	,, ,,	5,000		3 ,,
,,	5,000	,, ,,	10,000		4 ,,
,,	10,000	,, ,,	20,000		5 ,,
,,	20,000	,, ,,	40,000		6 ,,
,,	40,000	,, ,,	70,000		7 ,,
,,	70,000	,, ,,	100,000		8 ,,
,,	100,000	,, ,,	150,000		9 ,,
,,	150,000	,, ,,	200,000		10 ,,
,,	200,000	,, ,,	400,000		11 ,,
,,	400,000	,, ,,	600,000		12 ,,
,,	600,000	,, ,,	800,000		13 ,,
,,	800,000	,, ,,	1,000,000		14 ,,
,,	1,000,000	. . . . .			15 ,,

The duty is denoted by means of a stamp on the affidavit, and provision is made for the delivery of a "corrective affidavit" where an adjustment of the duty originally paid is found necessary. In the case of small estates not exceeding the gross value of £300 a fixed duty of 30s., and of estates between £300 and £500 gross value 50s., may be paid, the grant of representation being obtained through the agency of the officers of inland revenue on payment of a fee of 15s. in lieu of the fees ordinarily charged in the Probate Division of the High Court. In Scotland, where the procedure at death differs from that in force in England and Ireland, the duty is payable on the inventory which is required to be exhibited in that country—where property is situated in more than one of the three kingdoms, arrangements are made by which one grant of representation suffices.

Among other alterations introduced by the Budget of 1910 was the Increment Value Duty. This, after April 30, 1909, is leviable at the rate of £1 for every complete £5 of the increased value of the land, when, on the occasion of any transfer or sale, and at the death of the owner, the property is valued for Estate Duty. For details see the Finance Act, 1910. It further enacted that Real Property may be transferred as payment of Estate Duty, Settlement Estate Duty, or Succession Duty; that gifts of over £100 made during the last three years of life, with the exception of gifts for public or charitable purposes, in consideration of marriage, or as part of reasonable normal expenditure, are regarded as property passing at death and taxed accordingly. Settlement Estate Duty was raised from 1 to 2 per cent.

The Estate Duty produced the sum of £14,231,000 in the year 1908-9. Taken as a whole they form the most important branch of the death duties—more than 77 per cent of the total. The yield exceeded £500,000 for the first time in 1814, £1,000,000 in 1837, £1,500,000 in 1863, £2,000,000 in 1872, £4,000,000 in 1883, £10,000,000 in 1895, £12,000,000 in 1900. The produce for 1908-9 represented the duty levied at the rates imposed by the Act of 1907; in 1912-13 it was £20,046,347, the large increase resulting from the Act of 1910. The estates upon which the duty was collected may be classified thus (1913):—

Net Value of Estate.	No. of Estates.	Value.
		£
Not above £1000	48,179	19,906,000
Above £1000 and not above £100,000	22,316	174,904,000
Above £100,000	293	84,442,000
	70,788	279,252,000

(2) *Legacy Duty.*—This duty, originally a stamp duty on receipts, is now more fitly described as "a tax upon movable property; its incidence depends upon the domicile of the deceased owner, and its amount upon the value of the bequest or succession, and upon the degree of consanguinity existing between the deceased and the legatee." It is payable now (1914) at the following rates:—

Husband or wife	1 per cent
Lineal issue or lineal ancestor . .	1 ,,
Brothers and sisters and their descendants	5 ,,
Uncles and aunts, all other relations, and any other person . . .	10 ,,

The 1 per cent duty is not levied when the principal value of the property is less than £15,000, or when the value of the legacy or Succession does not exceed £1000 (£2000 in the case of widow or child of deceased), whatever may be its principal value. The duty is payable when the legatee comes into the possession of his legacy, and owing to the complexity of the manner in which property may be disposed of by a testator, the rules for its assessment are of an exceedingly complicated character. The duty is paid in money, although a stamp is impressed on certain forms of account in order to denote the discharge of the

liability. There are some exemptions in favour of the Royal Family, learned societies, etc.

The legacy duty produced £3,336,000 in 1908-9, and it then comprised nearly 18 per cent of the total yield of the death duties. The receipts amounted to £546,000 in 1809, £1,070,000 in 1822, £2,935,000 in 1877, £2,731,000 in 1895-6, and £3,909,000 in 1907-8. This last-named sum was not exceeded until the figures increased considerably under the present scale of rates (1914), being £4,506,923 in 1912-13.

Considerable difficulties arise in the collection of the legacy duty by reason of the length of time which may elapse between the death of a testator and the receipt of a legacy. But these difficulties cannot well be avoided if a consanguinity scale is maintained, and the retention of such a scale is now almost universally supported by public opinion. All present and future claims for legacy duty under a will may be compounded for by agreement, but this course is not adopted to any large extent.

(3) *Succession Duty.*—This duty supplements and completes the duty on legacies. It charges "all successions to property, real as well as personal, whether the title be under settlement or will, by descent, intestacy, or survivorship." The rate payable depends on the consanguinity of the person from whom the succession is derived. Where Estate Duty is not payable the following is the scale :—

Lineal issue or lineal ancestor . .	1½ per cent
Brothers and sisters and their descendants	4½ ,,
Uncles and aunts ,, ,,	6½ ,,
Great uncles and aunts ,, ,,	7½ ,,
Any other person	11½ ,,

The capital sum upon which these rates of duty are calculated is ordinarily arrived at by ascertaining the net annual value of the succession after deduction of necessary outgoings, and by calculating the worth of an annuity for an amount equal to such net annual value, for the life of the successor, according to the annuity tables set out in a schedule to the Act 16 and 17 Vict. cap. 51. Thus if the annual income of an estate be £350, and the necessary outgoings £50, the successor being thirty-five years of age, the duty is calculated on £4725, that being the assumed value of an annuity of £300 at that age. The amount so assessed is payable either by eight equal half-yearly instalments, the first being due twelve months after the succession opens, or, as an alternative, by three annual instalments of one-eighth of the duty and by a fourth instalment equal to the amount of the remaining five-eighths. Like the legacy duty, the succession duty is payable in money, although a stamp is impressed on the account required to be brought in. Certain small successions are exempt and provision is made to prevent the charge of both legacy and succession duty on the same succession.

The succession duty produced £565,000 in 1858-59, and twenty years later the produce was £725,000. In 1890-91 it was £1,209,000, and £1,309,000 in 1901-2, the maximum amount reached. Since that date it has fallen, and was only £767,039 in 1912-13.

The succession duty has been criticised on the ground that the charges it imposes on real property are less than the corresponding ones on personal estate. This inequality was to some extent redressed by the legislation of 1888, but the manner in which the duty is assessed and paid still favour settled personalty and, to a greater extent, realty. The inequality is, however, defended by reference to the exceptional pressure of the income tax on landed property, and to the incidence of local and imperial taxation generally.

[Wallace, *Epitome of the Death Duties*, 1886.—Trevor, *Digest of Taxes on Successions*, 4th ed. 1881.—Hanson, *Probate, Legacy, and Succession Duty Acts*, 3rd ed. 1876.—Hanson, *Revenue Acts of 1881*, 1883.—M'Culloch, *Treatise on Succession to Property vacant by Death*.—Thring, *Introduction to the Succession Duty Act*, 1853.—Archbold, *Succession Duty Act of 1853*, 1854.—Griffith, *Digest of the Stamp Duties*, 9th ed. 1886.—Harris, *English Death Duties*, 1890.—Buxton and Barnes, *Handbook to the Death Duties*, 1890.—Dowell, *History of Taxation and Taxes in England*.—Hansard, *Debates, Reports of the Commissioners of Inland Revenue*.—*Finance* (1909-10) *Act*.] T. H. E.

DEATH-RATE

Analysis of Contents.—Definition and division of the subject. I. Death-rate as a factor in the natural increase of population, p. 493. II. The causes of variation in death-rate; (*a*) such causes as age and sex; (*b*) such as vice, unhealthy occupations, indigence, insanitary residences, p. 494. III. Death-rate, as indicating (by its decline) national prosperity, p. 497. IV. In relation to insurance, p. 497.

I. DEATH-RATE may be defined as the ratio between the number of persons dying, out of a certain population, in a unit of time, generally a year, and the number of the population. But as the number of the population cannot be supposed constant for any considerable time, there is some difficulty in rendering precise the conception which has been indicated. To remove the difficulty completely the use of the differential calculus would be required, but it is not necessary to call in that aid except for certain actuarial calculations. For the less technical inquiries which are the object of this article the general idea which the definition above given conveys is sufficiently clear.

The death-rate is the most important ratio or coefficient in vital statistics. While co-ordinate with birth-rate as a factor in the natural increase of population, death-rate is more important than BIRTH-RATE (*q.v.*) on the following grounds. The investigation of the causes which affect death-rate is more directly connected with a practical art, that of preventing disease. Again birth-rate by its variation gives a more equivocal sign of national prosperity or the reverse, than death-rate. A rise in birth-rate

may be due to increased improvidence or illegitimacy, as well as to material prosperity; whereas a fall in death-rate can hardly admit of any other than a favourable construction. Again the chance of death is an object of wider and deeper interest than any other datum in vital statistics; and a great practical business, that of insurance, is based on these probabilities. These points of comparison being taken as headings; it may first (I.) be observed that the natural increase, being the difference between birth-rate and death-rate, is not necessarily small where death-rate is large, or large where death-rate is small. Thus the death-rate for Russia in recent years, 35·7 per mille (Marshall, *Principles of Economics*, bk. iv. ch. iv. and authorities there cited), exceeds the average of Europe, 28 per mille, by a fourth, yet the natural increase for Russia, 13 per mille, is above the average for Europe. Again the death-rate for England is below, the natural increase above, the average for Europe.

Other examples are given in the article on BIRTH-RATE; where it was pointed out that large birth-rates are frequently attended by, but do not cause, large death-rates.

II. The question there raised is to be more fully considered here under the head of causes of variation in death-rates. (*a*) One such cause is difference of age. If the population of any country is divided into groups of different ages, the death-rates for the different groups differ enormously. Thus (according to the English Life-Table, No. III., which may be regarded as a standard) the mortality for infants under one year old is in England 165·6 per 1000 (*Vital Statistics, Selections from the writings of William Farr*, by Noel A. Humphreys, p. 491), while it is only 5·2 per 1000 at the age-period 10-15 (*ibid.* p. 487). After that period the death-rate increases with the age. At the period 75-85 it has become 140 per 1000, and is still greater at later ages; the death-rate of second childhood equals that of infancy. The general law is happily indicated by Addison in his Vision of Mirza (*Spectator*, No. 159, 1st September 1711), where the human race is imagined passing over the flood of eternity by a bridge, supported on as many arches as there are years in man's life. "Hidden pitfalls were set very thick at the entrance of the bridge, so that throngs of people no sooner broke through the cloud but many of them fell into them. They grew thinner towards the middle, but multiplied and lay closer together towards the end of the arches."

It follows from this law that in a population where there is a particularly large proportion of infants or old persons the general death-rate, the mortality "at all ages," as it is called, is apt to be high. Now in an increasing population, as compared with a stationary one, the number of births continually augmenting, the number of infants is particularly large. Hence it is plausibly argued that an increasing population, just because it is increasing, will have a high death-rate; that high birth-rates, *per se*, make high death-rates; other things, and in particular the mortality at each age-period, being supposed the same.

But here, as so frequently in statistics, first appearances are fallacious. It is true, no doubt, that in an increasing population there is a particularly large proportion of infants subject to a high mortality. But it is also true that, in such a population, the proportion of persons at those advanced ages at which the mortality is high is apt to be particularly small as compared with the numbers in the period of healthy adolescence (Farr, *Vital Statistics*, "Deaths." Humphreys "On the Value of Death-rates," *Journal of the Statistical Society*, 1874, vol. xxxvii.)

From these considerations it appears that great care must be exercised in allowing for the influence of age on mortality before drawing inferences from the death-rate as to the sanitary condition of a population. To take an extreme instance, suppose that the death-rate for the inmates of a prison were the same as that for the general population, this at first sight might appear a satisfactory state of things. But when it is considered that the prison population consists of adults, a class of which the mortality under ordinary conditions might be expected to be half that of the general population, the conclusion becomes very different.

To take a less simple case. The death-rate in many towns is particularly high. But it has been argued that this is not an unfavourable symptom, for that it is due to the presence of a great number of infants. But the truth is, that the inference from the high death-rates becomes *à fortiori* unfavourable when proper account is taken of the ages of the urban population.

A usual method of exhibiting such conclusions is to construct what is called a "normal" death-rate for any group under consideration; by supposing the persons at each period of age in that particular population to be affected with the mortality prevalent at that age in the general population (or any other population taken as standard). Thus in the case of three counties containing large towns, instanced by Mr. Humphreys in his instructive paper above cited, the actual death-rate was 26·5.[1] But the *normal* death-rate, or that which might have been expected, if the mortality at each age was the same as for the general population, was only 22.2.[1] Also the actual death-rate for three rural counties was 19; while the normal death-rate was 23·8. The two pairs of figures, whether compared with each other or

[1] Taking the simple average of the death-rates given for each of the three counties.

with the standard death-rate for a *stationary* population, which Mr. Humphreys gives as 24·47, show that the unfavourable inference concerning the urban as compared with the rural counties is stronger than at first sight appears. The original figures, 26·5 and 19, differ only by 7·5. But we may regard the excess of the mortality in the urban over the rural counties as virtually nine; if we take into account that the former normally would have been *less* by nearly two than the latter.

A more exact method of drawing such comparisons is to express the mortality of each section as a ratio of its actual to its normal mortality. This plan is adopted by Mr. Humphreys in his article on "Class Mortality Statistics," in the *Journal of the Statistical Society* for 1887. The following figures (extracted from Mr. Humphreys' Table IV., *loc. cit.*, p. 281) relate to the mortality in two classes of the Dublin population:

Description of Class.	Recorded death-rate per 1000.	Standard death-rate according to English Life-table.	Coefficient of comparative mortality.
Professional Class . .	19·8	25·2	632
General Service Class . .	36·8	21·3	1659

The first column gives the actually observed mortality at all ages for the more and less favoured class. The second column gives the corresponding *normal* mortalities (obtained on the hypothesis that the numbers at each age were those observed for Dublin, and the mortality at each age that observed for England). The third column gives the coefficients expressing the force of mortality; being each the ratio of normal to actual mortality, multiplied by 1000, or expressed as a *per mille*. It will be observed that the evidence of difference in healthiness afforded by the first column becomes *à fortiori* in the third column. The mortality of the "general service" class *appears* to be nearly twice as great, and *is* nearly three times as great as that of the professional class.

The cause of variations in death-rate which has been considered, namely difference of age, may be placed in a category of causes which are of practical importance, largely on the ground that it is necessary to allow for their action in order to estimate the effect of another class of causes which it is more within the scope of human art to alleviate. This distinction is nearly identical with Dr. Farr's of "causes inherent in the population, and causes outside the population" (*Vital Statistics*, p. 159 *et seq.*) Another cause belonging to the first category is sex. The full effect of this cause may be seen on inspection of a life-table. At the early ages the difference between the mortality of the two sexes is marked. At the zero-point of age it appears that the proportion of male to female still-born children is 139 : 100. For the period 0-5 the proportion of mortality is 72 : 62 (according to Dr. Farr's Life-Table for England and Wales). At the age of adolescence female mortality gains upon male; but again lags behind at later ages. The disturbing effect which this cause exercises on inferences drawn from the general death-rate is not so considerable as the effect of age. Mr. Humphreys in his paper "On the Value of Death-rates" already referred to (*Journal of Stat. Soc.*, xxxvii. p. 444), contrasting the English towns which have the greatest and the least proportion of male to female inhabitants, argues that the extreme perturbation of the general death-rates which may be expected from this cause is not more than two per mille.

Here may be mentioned the effect on mortality of the variations of the seasons. Of the four quarters of the year the first is the most fatal; next comes the fourth; the mortality of the second quarter is for this country on an average in excess, but occasionally below, that of the third quarter (Reports of the Registrar-General, tables showing death-rates in each quarter of the years since 1838). A very elegant graphical representation of such vicissitudes is given by M. Levasseur (after M. Janssens) for Belgian infants, in the *Jubilee volume of the Statistical Society*, 1885, p. 232. Quetelet's investigations of seasonal mortality in Belgium are particularly instructive (*Physique Sociale*, liv. ii. ch. v. §§ 8). He shows that the curve of death-rate at different seasons varies for different ages; and that very generally it presents two maxima, one in winter the other in summer. Besides the obvious importance attaching to such observations, they are valuable as enabling us to avoid perplexity in investigating other causes. The Registrar-General, in the investigation which will be presently noticed concerning the death-rate in different occupations, has very properly selected the samples (of deaths) on which his conclusion is based from all seasons indifferently (*Supplement to the 45th Report of the Registrar-General*, p. 29). A sophist by taking the samples for one occupation from a healthy season, and for another occupation from an unhealthy season, might have brought out almost any conclusion which he wanted.

Other causes, not admitting of such exact measurement, are race and climate (including properties of soil, water, etc.)

Also it may be expected that the mortality of unmarried persons will, *ceteris paribus*, be particularly large. The married have the advantage at almost all ages, as is shown by Dr. Farr (*Vital Statistics*, p. 441, and references

there given). But it is a nice question whether celibacy can be regarded as a cause of high death-rate. The high death-rate attending celibacy may be a case of *post hoc* not *propter hoc*; the finest individuals being selected for marriage; while "men with a weak constitution, ill-health, or any great infirmity of body or mind will not often wish to marry, or will be rejected" (Darwin, *Descent of Man*, pt. i. ch. v.)

(*b*) The causes which have been mentioned require to be taken account of by those who would avoid perplexity in investigating another set of causes which are perhaps of more direct practical interest: as being capable of remedy by human effort. This second category of causes may be divided under four heads: (1) vice, (2) unhealthy occupations, (3) indigence, and (4) insanitary residences,—agencies which are apt to be entangled with each other as well as with the first set of causes.

(1) There is much truth as well as exaggeration in Süssmilch's dictum ascribing the chief differences in mortality to "the manner of life, the moral circumstances, virtue and vice, indolence and industry." One example is the great mortality of illegitimate children. Dr. Farr cites instances in which the death-rate of illegitimate infants is double that of the legitimate (*Vital Statistics*, p. 198). A similar excess of mortality among illegitimate children is shown by Quetelet (*Physique Sociale*, bk. ii. ch. vii. § 2), Wappaeus (*Bevölkerungs Statistik*, pt. i. p. 214), and other continental statisticians. The vice of drunkenness is also conspicuously fatal. On this subject some of the most recent observations together with a reference to the best authorities will be found in the *Report on the connection of disease with habits of intemperance* by the collective investigation of the British Medical Association, edited by Isambard Owen. Among the earlier authorities may be mentioned Neison, who in his *Contributions to Vital Statistics* fully proves the connection between deep drinking and high death-rate; bringing out the remarkable fact that spirits are more fatal than malt liquors (*Contributions to Vital Statistics*, p. 218). Another authority particularly free from suspicion is the Registrar General, whose statistics with respect to occupations (Supplements to Reports for 1865, 1875, and 1885) point unmistakably to a connection between drink and death. The mortality of hotel-keepers and their servants is appalling, about three times as great as that of the most healthy classes. Among the diseases to which the classes mentioned and several others succumb, "alcoholism" plays a large part (Supplement to Report for 1885, p. xxx. *et seq.*)

At this point, however, the action of the cause which has been considered is intermixed with that which we have distinguished as cause (2), unhealthy occupations. It is difficult to pronounce with respect to the mortality in some occupations how much thereof is occasioned by unresisted temptation to drink, how much is due to other circumstances. Thus in the case of drivers ("Cab, Omnibus, Service," *loc. cit.*), the bill of mortality due to "alcoholism" is particularly large; but the same class also succumb in numbers to phthisis and diseases of the respiratory system, which may no doubt be connected with the exposure incident to the occupations in question.

(2) The observations referred to prove the influence of occupation on health in many cases to be real and considerable. The number of deaths observed in 1881-82—more than 400,000; the scrupulosity above noticed with which these samples have been selected impartially from healthy and unhealthy seasons; the allowance for the effect of age (expressed in the last column of table J, *Supplement to the 45th Report* 1885, p. xxvi.), are very convincing. The suspicion of accident is precluded by the general agreement between the statistics for 1861-62, 1871, and 1880-82. The same occupations constantly come out low or high in the scale of mortality. At one end of the scale are clergymen with a co-efficient of death-rate or "comparative mortality figure" 556, gardeners and farmers with co-efficients respectively 599 and 681, with at the other end of the scale hotel-keepers and their servants, for whom the corresponding figures are respectively 1521 and 2205, also chimney-sweeps, workers in earthenware (1742), and the residual class of general labourer (2020). (See J. T. Arlidge, M.D., *The Hygiene, Diseases, and Mortality of Occupations*, 1892.)

(3) In the last case and probably some others, a further cause—indigence, comes into play. The term indigence must be construed strictly as want of necessaries, "inadequate warmth and food" (Farr). Mere absence of riches is not fatal to life, as Neison's statistics with respect to members of friendly societies show (*Contributions to Vital Statistics*; cp. Wappaeus, *Bevölkerungs Statistik*, pt. i. p. 201). The very different consequences of actual indigence may be traced in certain statistics of class mortality among the population of Dublin compiled by Dr. Grimshaw, and discussed by Mr. Humphreys in a paper already referred to (*Journal of the Statistical Society* 1887, vol. 50). In the same paper reference is made to the observations made by Mr. Ansell and Hodgson and others, proving that the more favoured classes enjoy greater vitality. Especially with respect to infant mortality is the poverty of the poor his curse. The death-rate for infants under 5, in the "general service" class of the Dublin population, was 110 per mille, in the "professional" class 22 per mille (*ibid.* p. 282). So the mortality of peers' and clergymen's children is three times less than the mortality of infants of the same age in large towns (Farr, *Vital Statistics*, p. 159). These conclusions are confirmed by numerous

observations on the comparative death-rate in the poorer and more flourishing parts of towns; some of which are cited by Wappaeus (*Bevölkerungs Statistik*, pt. i. p. 200).

(4) Here, and indeed generally, mere indigence, the want of necessaries, is aggravated by a fourth cause, insanitary conditions of residence, or, in Dr. Farr's more exact language, "exposure to poisonous effluvia and destructive agencies." The interaction of these two causes is very strikingly exhibited in an article in the *Giornale degli Economisti*, "Nuova Politica Sanitaria, in Italia" (March 1891); where it is contended that the sanitary measures carried out in Italy defeated their own end. For the taxpayer, deprived by the burden of taxation of the necessaries of life, becomes thereby more exposed to the shafts of disease. In our terminology cause (4) might be reduced, and yet the effect would be more fatal if concurrently cause (3) were aggravated.

The nature and variety of insanitary conditions are ably discussed by Dr. Farr (*Vital Statistics*). A vast mass of experience as to the evil effect of crowding is summed up by him in the simple formula that the mortality of districts is as the twelfth root of their densities (*Vital Statistics*, p. 175). In symbols $\frac{m}{m'} = \left(\frac{D}{D'}\right)^{\cdot 12}$. The fact that in an earlier paper the *sixth* root was proposed, and that in the formula the index ·12 does not signify the twelfth, but rather the eighth or ninth root, is not suggestive of extreme precision. At any rate the law makes no claim to be more than empirical. It is not fulfilled by the experience of the crowded Peabody Buildings; where the mortality is less than for London generally (Newholme, *Journal of the Statistical Society*, 1891). It is interesting to inquire whether the causes of death which admit of reduction are being reduced by science; or:—

III. More generally, and without reference to causation, whether a decline of death-rate attends the progress of civilisation. The most extended series of observations is that which the Swedish census presents (quoted in the 25th vol. of the *Journal of the Statistical Society*, and by Wappaeus, *op. cit.*, p. 229). Looking at these we may now say with even more truth than Malthus said: "The gradual diminution of mortality since the middle of last century is very striking." According to Dr. Farr "the mortality of the city of London was at the rate of 80 per 1000 in the latter half of the 17th century, 50 in the 18th, against 24 in the present day" (*Vital Statistics*, p. 131); 14·7, Rept. Registrar-General, 1908.

On the other hand the returns for France and Russia, extending over a long period of years, which Wappaeus adduces (*loc. cit.*), do not show a marked decline. And it is remarkable that the death-rate for England and Wales has remained virtually unaltered for the greater part of the time over which the record extends, from 1841 to 1871. Since that period indeed a decline has set in, ascribed by some to improved sanitation.

There is some difficulty in estimating the gain which has been made in recent years, owing to the circumstance that while the death-rates at some (the earlier) ages decreased, at other (later) ages the death-rates increased. Such at least was the relation when the statistics bearing on this point were first discussed by Mr. Humphreys in his valuable paper in the *Journal of the Statistical Society* for 1883; since that date the gain in vitality at different ages may have become more uniform (cp. Report of the Registrar-General for 1885, Supplement).

IV. The significance of the recent change in death-rates may best be appreciated by glancing at that aspect of the subject which in the arrangement here adopted has been placed last; namely, that which relates to life insurance. The business of insurance is beyond the scope of this article. But the theory of life-tables on which that business rests must be understood in order to make a right use of mortality statistics, even for the general purposes here contemplated.

The simplest view of the matter is that according to which a population is regarded as "stationary"—a steady influx of life through the channel of birth, a steady efflux at each age, at a rate proper to each age. To compare the vitality of two populations thus conceived, there are available several measures besides the common death-rate hitherto considered. One consists of that age which is such that just as many persons die before it as live after it; the "equation of life" as it is called. For instance in the life-table constructed for the healthy districts of England and Wales by Dr. Farr, this meridian point is at the age 58 nearly. It is an even chance that a new-born infant will, or will not survive that age. Similarly may be determined the age to which it is an even chance that a person aged 10 or 20 years will live. Thus Mr. Neison finds that for males aged 10 in the rural districts of England and Wales, the equation of life is 58·375 years; in the city districts the corresponding figure is 51·743 (*Contributions to Vital Statistics*, p. 100). This eminent statistician holds that "the equation of life . . . appears to be the best mode to determine the comparative value of life in different classes or different districts" in certain cases (*ibid.*) at least.

Another measure of vitality, however, has obtained more vogue, namely, the average duration or so-called "expectation" of life, or "mean after-time" as Dr. Farr proposed to call it. For instance, the mean after-time for males at birth, according to the English life-

table No. 3, is 44·4 years; at the age of 11 (the prospect of living having improved for those who have cleared the dangers of infancy) the mean after-time is 51 years nearly.

The following is an instructive example of the uses to which this co-efficient lends itself. Observing the age at which a number of sovereigns or other notables, as popes, during a series of generations had acceded, we can compare the average length of their reigns with the average length of life deducible from a standard life-table; and thus ascertain that the lives of men are lengthened "with the process of the suns."

This example illustrates what is implied in the idea of an average duration, the putting together and treating as commensurate quantities the lives lived by different persons. In fact, actuaries often consider not so much the mean life as the sum of lives, the "years lived" by a whole population. It is thus that the gain in vitality referred to under the last heading is measured. Considering the infants born in any one year in England and Wales numbering say 859,000, the registrar-general calculated that the years to be lived by this generation will, in virtue of the change in death-rates at various ages which have occurred during recent years, be more numerous by some *two million years of life* (Report of the Registrar-General for 1885, Supplement; cp. Humphreys, *Journal of the Statistical Society*, 1883). Of the millions of lives thus yearly gained, by far the greater part are lived at the ages 25 to 60, which are most "useful," most conducive to the defence and enrichment of our country.

So far with reference to a stationary population, abstracting the fact that the actual population is continually increasing. But the logic of the subject and its fallacies would be imperfectly treated without noticing the modifications which this fact introduces. In a stationary population it is evident that the mean duration, or "expectation," of life is identical with the mean age at death; and a little attention will show that each of these co-efficients is identical with another measure with which we are here more particularly concerned, namely, the number of persons out of whom one dies per annum, the *inverse death-rate* as we may call it. But when population increases these identities are broken up. The inverse death-rate becomes a little greater, the mean age at death becomes much less than in a stationary population. Thus the mean expectation of life being, in Dr. Farr's time, 41 for England and Wales, the inverse death-rate was 1 in 43; the mean age at death about 29. The neglect of these distinctions has proved fatal to the work of amateurs who have attempted to use measures of mortality more delicate than the common death-rate "at all ages." The indications given by this last are less fallacious, as has been shown above (under the heading of age and sex), than might have been supposed. Yet it is desirable to supplement if possible this rough measure by arranging our observations in the form of a *Life-Table*.

[The authorities on this subject are almost as numerous as the writers on statistics. As a lucid statement of the principal facts for the leading nations of the world the *Confronti Internazionali per gli anni* 1865-83, issued by the Ministero di Agricultura, Industria, e Commercio, Rome, may be specially mentioned. Works which instructively place a number of facts in the light of theory are:—Quetelet's *Physique Sociale*.—Wappaeus, *Bevölkerungs Statistik*.—Mayr's *Gesetzmässigkeit in Gesellschaftsleben*.—Haushofer's *Lehr- und Handbuch der Statistik*.—Westergaard's *Theorie der Statistik*, and other books cited in the text. For some of the finer logical points which have been touched, Dr. Farr's *Vital Statistics*, edited by Mr. Noel Humphreys, should be studied; and Mr. Humphreys' own papers in the *Journal of the Statistical Society* for 1874, 1883, and 1887.]

P. Y. E.

DEBASEMENT OF COIN, History of the. Coins may be debased in three ways—(1) a debasement in total weight; (2) a debasement in fineness; (3) a debasement by increasing the rating or nominal value, the coins continuing at the same standard weight and fineness. The effect of the last may also be brought about unintentionally by a fall in the value of the precious metals, and herein lies the secret of much of the debasement of the middle ages.

The first historically recorded debasement is that effected at Athens by Solon (B.C. 594) to redeem the poorer citizens from debt. By his advice the weight of metal in the silver drachma or standard Athenian coin was reduced more than 25 per cent, thus enabling 100 drachmæ to be coined out of the mina or unit of weight instead of only 73 as previously (Plutarch, *Solon*, c. 15). Creditors were compelled to take these light coins as full payment, and were thus obviously defrauded; but perhaps in this case the end may have justified the means (Grote, *Hist. of Greece*, pt. ii. ch. xi.; Boeckh, *Metrologie*, ch. ix.) It must be admitted too that, as a rule, the Greek states were not often to blame in this respect, partly perhaps because their philosophers inculcated sound principles (Lenormant, *Contemp. Rev.*, Feb. 1879), but more probably owing to their small size. This naturally caused a large proportion of their money transactions to be international, and in foreign trade coins can only be exchanged for their value as bullion whatever their rating as legal tender within the issuing state; debasements therefore would be avoided for mere convenience where the foreign trade was of primary importance.

In the large and constantly growing Roman state no considerations of this sort existed, nor,

as far as we know, was the subject of money at all adequately studied; on the contrary, a continuous series of debasements lends colour to the opposite view. The history of these is professedly given by Pliny (xxxiii. 13), but the evidence of actual coins that have been discovered makes it probable that his account is incomplete. According to his view the Roman coinage, which originally had the "as" or pound of copper for the unit of value, remained unchanged till the First Punic War. The coined "as" was then reduced suddenly to 2 unciæ or ounces, that is, to $\frac{1}{12}$th of its former weight. About this time 10 asses made a denarius and $2\frac{1}{2}$ a sestertius; but during the Second Punic War the unit was further reduced 50 per cent, and asses were coined weighing only 1 oz., 16 of which made a denarius and 4 a sestertius. Finally, by the Papirian law, B.C. 191, the "as" was made to weigh only $\frac{1}{2}$ oz., but it is hardly necessary to regard this as a debasement of the standard, for by this time silver was also largely current. The silver, however, was in its turn debased, and the denarius, which had weighed $\frac{1}{72}$d of a lb., was reduced to $\frac{1}{84}$th. In B.C. 91 a plated coinage was issued, but was soon withdrawn. The denarius, however, continued to fall, and under Nero weighed only $\frac{1}{96}$th of the lb. In the same reign the gold aurei, which had originally been coined at 40 to the pound, had become debased 12 per cent. Under Alexander Severus these coins got the name of solidus, corrupted afterwards into the French "sou." Constantine fixed them at 72 to the pound, but the mere name gives a measure of their subsequent debasement in the West. In the Byzantine empire, on the contrary, this standard was long preserved, and seems to have still existed in 1204 when the Crusaders captured Constantinople.

In the dark ages gold again fell into disuse, and endless variations took place in the silver standards set up by the numerous barbarian rulers. The first monarch with the power and the will to alter this was Charlemagne. He introduced a silver solidus $\frac{1}{20}$th of a lb. in weight and divided into 12 denarii, but his death in 814 cut short the attempt to get it uniformly adopted throughout his empire. Its use, however, gradually spread, and in England, since the conquest, has formed the basis of our monetary system. Charlemagne's liber, solidus, and denarius are the origin of the £ s. d. we still use, and William the Conqueror's only coin, the silver penny, really did weigh $\frac{1}{240}$th of the lb. This, the so-called Tower pound, was $\frac{3}{4}$ oz. lighter than the Frank pound, but the English standard of fineness (11 oz. 2 dwt. of pure silver to 18 dwt. of alloy) was very high.

The history of the English debasements does not begin till 1300, when Edward I. reduced the weight by cutting the pound into 243 pence. This bad example was soon followed; by 1344 the number had increased to 266, and in 1352 it rose to 300. Early in the next century the pound weight of silver was valued at £$1\frac{1}{2}$ or 360 pence, which by the reign of Edward IV. became 450. In 1526 Henry VIII. abolished the Tower pound as the unit of weight and substituted the French pound troy, weighing $\frac{3}{4}$ oz. more; he, however, continued to reduce the weight of the penny, 540 being coined out of the new pound, equivalent to $506\frac{1}{4}$ out of the old. Further, he was the first king to tamper with the fineness. This began in 1543, when he increased the amount of alloy in the pound from 18 dwt. to 2 oz., following this up by an issue of coins in 1545 containing 50 per cent of alloy. Under Edward VI. the money became still worse, and in 1550 the greatest amount of debasement ever known in England was attained, when a pound of metal containing no more than 3 oz. of pure silver was coined into as many as 864 pence. This lasted only two years. In 1552 an improvement began, which, though not completed till the great recoinage by Elizabeth in 1560 (Froude, *Hist. of Eng.*, vol. vii. ch. vi.), in the end reduced the number of pence cut from the pound to 720, and restored the standard English coins to their old degree of fineness. The latter has been maintained ever since, but it was not till 1600 that the weight was definitely settled. Silver was then coined at 744 pence to the pound, and this continued in spite of some famous proposals for debasement (Macaulay, *Hist. of Eng.*, ch. xxi.) so long as silver remained the standard. Ever since the 14th century gold has been coined in England, but for the greater part of the time only as a subsidiary coinage. It is consequently unnecessary to discuss the numerous debasements and changes of rating to which the earlier coins were subjected in the endeavour, usually a fruitless one, to preserve a proper proportion between the two precious metals. England, however, by the end of the 17th century had become so rich, and gold so much used, that it gradually assumed the superior position. In 1717 a recoinage took place in which the change was legally recognised, and ever since our standard coinage has been gold. When, therefore, in 1816, the silver pound was ordered to be cut in 792 pence, no debasement, properly speaking, occurred, as the object was to make the coins tokens. Since gold has been the standard, there has been no intentional debasement, but a great recoinage was necessitated in 1774. The present money system is regulated by the Coinage Act 1870, 33 & 34 Vict. c. 10.

In Scotland the system of coinage was originally borrowed from that of England, and the two remained identical as late as 1355, in which year Edward III. intentionally debased the English silver in imitation of David II. Subsequently, however, the Scotch kings, under

the influence of French ideas, so multiplied their debasements that they left the English far behind. By 1390 English money was worth twice as much Scotch, and the latter eventually ceased to be current by tale in England. In 1600 £36 Scotch were coined from the pound of silver as compared with 62s. English. The greatest debasement in fineness occurred between 1576 and 1579, but the amount of alloy in the pound never rose above 4 oz. The two coinages were again assimilated at the union in 1707.

In Ireland regular coinages were first introduced by John in 1177, and regular debasements by Edward III. By 1465 the Irish shilling was worth only 9d. English. Three years later 960 pence were coined from the pound and a reaction set in, but in 1520 the coins were again so bad that payment by weight became general. As in England Henry VIII. debased the fineness, and even Elizabeth transferred Edward VI.'s worst debasements to Ireland when she restored the English coinage; James I. attempted to restore the old Irish fineness (9 oz. silver to 3 oz. alloy) and decried Elizabeth's shillings to 2d., but the bad money drove out the good. Complaints of scarcity became constant, and in 1651 all sorts of tokens and foreign coins were in circulation. In 1689 James II. raised the rating of all coins 8⅓ per cent, as a war measure against William III., and this remained permanently in force till 1825. It, however, failed to bring in the necessary funds, and in 1690 he issued a coinage of old guns, broken bells, nails and pewter pots. In the next century there was little improvement, but much dissatisfaction; the case of Wood's copper coinage is the most famous. In 1804 twenty-one shillings of the best Irish silver were not worth nine English; in fact, the debasements only terminated when the Irish and English coinages were assimilated in 1825. On the continent France may be taken as the typical country, and there the debasements were far worse than in England, as no central power was for a long time developed. In 1315 thirty-one barons claimed the right of coinage besides the king, and mutual rates of exchange were arranged for their coins. Dante has (Par. xix.) singled out Philip le Bel as the typical false moneyer, but many other sovereigns were quite as bad. The standard which the people always claimed was that of St. Louis, who in 1226 cut the marc of 8 oz. into 58 solidi or sous, but unfortunately this was afterwards very rarely attained. During the long wars with England the country practically became bankrupt, and the kings dealt recklessly with the coinage. In 1360, when John was captive, the silver marc was once rated at 240 sous, but this was only a temporary measure, and before the end of the year the marc had again fallen to 100 sous. In 1454, when the English were finally expelled, the marc was coined into 175 sous, but quieter times only brought more regular debasements. In 1575 the sou had become so small that silver livres, worth 20 sous each, took their place as the ordinary money of account. 17¼ of these, equivalent to 345 sous, were coined from the marc. They soon, however, sank in value, each Bourbon king in succession reducing the weight till 1789, when as many as 52 were coined from the marc. In other words a livre of this date weighed only 7/52 of the liber of Charlemagne though bearing the same name. During the Revolution even the name was discarded and the synonym "franc" substituted. In all other countries the history has been the same. In modern Germany the mark is only worth a shilling. In Spain the maravedi, originally a gold coin worth 14 shillings, is now a small copper coin not worth a farthing. In Portugal the reis, too small at last for use, are calculated in hundreds. No country, however, has been worse than France.

[A fairly full general outline of the debasements in classical British and French coins may be found in Macleod's *Dict. of Pol. Econ.*, vol. i., "Coinage." For France the standard book is Le Blanc's *Traité Historique des Monnoyes de France*; for England Lord Liverpool's *Coins of the Realm.*—Conigliani, *Note historichi sulla Questione giuridica dei pagamenti monetarii* (1891).—Galiani, *Della Moneta*, bk. ii. vi. iii. ii.—Adam Smith, *Wealth of Nations*, i. xi.—Del Mar, *Money in Ancient Countries* (1885).] W. J. C.

Debasement of coin "in its proper sense means a reduction of fineness," according to an authority quoted by Prof. Walker (*Money*, p. 187). In a wider sense the term denotes also the reduction of the quantity of pure metal in the coin by diminishing its weight while preserving its customary fineness; whether that diminution is effected at the mint, or after mintage by abrasion, clipping, or sweating. For example, Henry VIII. practised debasement proper when, by introducing an increased proportion of alloy, he lowered the fineness of silver to nearly a third of what it had long been before he began tampering with it. Debasement in the wider sense was committed by Edward VI. when he "not only continued the issue of base money commenced by Henry, but lowered the quantity of mixed metal" in each coin (Rogers's *History of Agriculture and Prices*, vol. iv. p. 734). (See Alloy.) Another example of the less specific sense is afforded by the "debased state of the currency," "previous to the recoinage of 1696," to use Ricardo's words (*Reply to Bosanquet*, p. 96). Elsewhere Ricardo speaks of the metallic currency being "debased by wearing or clipping." (*High Price of Bullion*, p. 26). The term is to be taken in its wider sense in Ricardo's important proposition: "However debased a coinage may

become, it will preserve its mint value, that is to say it will pass in circulation for the intrinsic value of the bullion which it ought to contain, provided it be not in too great abundance"; and provided that, as Prof. Walker adds, it is not discredited (Ricardo, *Political Economy*, ch. xxvii.; *Reply to Bosanquet*, ch. vi.; Walker, *Money*, p. 199). The first of these conditions is not likely to be fulfilled in the case of debasement proper. Governments which debase are likely to over-issue. Striking instances of this abuse are given by Rogers in his *Historical Gleanings* (i. pp. 95-97 quoted by Prof. Walker, *loc. cit.*) F. Y. E.

DEBENTURE. The word "debenture" has been judicially defined as "a document which either creates a debt or acknowledges it" (Justice Chitty in Levy *v.* Abercorris Slate and Slab Company, 37 Chancery Division, on p. 264); every document which answers that description is a debenture, and the use of the word in itself confers no rights whatever on the holder. It is very important that this should be generally understood, as there is a vague belief in the minds of many persons that a debenture must always be secured by a charge on some property, or at least entitle the holder to priority over other creditors. There are certain classes of debentures, issued by virtue of certain acts of parliament, which confer special privileges on the holders (as, for instance, the mortgage debentures issued under the Land Debentures Acts of 1865 and 1870, as to which see MORTGAGE BANKS, or the debentures issued by local authorities under the Local Loans Act, 1875, as to which see LOANS, LOCAL); but, speaking generally, the rights of the holders of any particular issue of debentures must be ascertained from the instrument or trust-deed or other document referred to in the same. Debentures issued by foreign or colonial governments or municipalities, as a general rule, do not confer any special privileges on the holders; they are simply promises to pay the principal sum on a given date and interest at a certain rate in the meantime. Debentures of companies registered under the Companies Acts, on the other hand, are now mostly secured by a mortgage of some particular property, or by a charge on the whole undertaking. The latter is called a "floating charge" and does not prevent the company from disposing of its property by sale or mortgage in the ordinary course of business, but it is generally provided that as soon as default is made in the payment of interest or principal, or as soon as the winding-up of the company is ordered or resolved upon, the debenture holders may enforce their security, which thus attaches to the whole of the company's property existing at that moment, but subject to any mortgages or charges created for the purposes of the company's business while it was a going concern. If any property is to serve as a security for debentures in a way which makes it impossible for the company to alienate it at any time, there must be a regular mortgage of such property to trustees acting for the debenture holders by a separate trust-deed. A trust-deed by which movable goods are mortgaged must be registered as a bill of sale, but a debenture issued by an incorporated company which contains a charge on such goods need not be so registered (see BILL OF SALE). Debentures containing a charge or mortgage are sometimes called mortgage debentures.

It should be pointed out that the law of most foreign countries does not recognise mortgages of immovable property unless they be registered according to the law of the place, and also that according to most systems of foreign law, movable property cannot be charged in favour of a creditor while remaining in the debtor's possession. Holders of debentures secured by foreign property should remember these facts and not be surprised if, in trying to realise their security abroad, they find themselves in conflict with foreign mortgagees or judgment creditors or a foreign trustee in bankruptcy; and when trustees are acting for the debenture holders, they should be careful to perfect their security as much as possible, by complying with the formalities required by the law of the place where the property is situate.

The special acts of British railway companies generally incorporate the provisions of the Companies Clauses Act, 1845, with respect to the issue of debentures (§§ 38-55), but these provisions leave a wide margin as to the rights of debenture holders, which mainly depend on the special act, authorising a particular issue, or on the conditions attached to it by the company.

A debenture must always be repayable at some time; a fixed date may be appointed for that purpose, or the gradual repayment of the debentures of a particular issue by yearly drawings, or in a certain order of succession, may be provided for. In many cases the company or corporation issuing debentures reserves the right of redeeming the same before the date fixed for repayment, either on the happening of a given event (*e.g.* the sale of the property) or entirely at the borrower's option. There are also so-called "perpetual debentures," which are usually made payable only in the event of winding-up or default on the part of the borrower in the paying the interest.

Debentures may be issued to bearer or to the registered holder, or they may be transferable by indorsement. Debentures to bearer *prima facie* are not "negotiable instruments" (see COMMERCIAL INSTRUMENT). The question in each case turns upon the conditions of the particular issue and on the usage of the stock exchange.

As debentures to bearer are now subject to a stamp duty of 20s. per £100, which must be

paid by the borrower, whilst the stamp duty payable on the transfer of a registered debenture is payable by the transferor, companies have of late years preferred to issue registered debentures.

[As to debentures issued by companies under the Companies Acts, see Lindley on *Company Law*.—Palmer, *Company Precedents*.—Buckley on the *Companies Acts*. As to debentures issued by railway companies, see Hodges on *Railways*.—Brown and Theobald on *Railway Companies*. As to the negotiability of debentures, see also Chalmers, *Bills of Exchange*, 4th ed. p. 319.]

E. S.

DEBENTURE STOCK. No general definition can be given of this term, as a distinction must be drawn between two different kinds of debenture stock.

(*a*) Debenture stock issued by companies incorporated under the Companies Acts differs from debentures in form but not in substance. A debenture is an instrument embodying the contract between the company and the holder, and generally creating a charge on property. "Debenture stock," on the other hand, is only a name for the debt which it represents, which debt is created and secured by a trust deed between the company and the persons who act as trustees for the holders of debenture stock. By the effect of this deed the holders of debenture stock are, as a rule, placed in the same position as the holders of debentures secured in the usual form, and in cases where a general charge is to be given, it is usual for companies to issue debentures for the amount of the debenture stock to be held by the trustees as a collateral security for the payment of the debenture stock and the interest thereon.

Debenture stock of this kind usually takes the form of so-called "perpetual debenture stock," that is to say, the holders are not entitled to claim repayment of the principal sum until the winding-up of the company, or until default has been made in the payment of the interest; but it also frequently happens that a date is fixed for repayment; any of the ways in which redemption or repayment may be provided for in the case of a DEBENTURE (*q.v.*) is also permissible in the case of debenture stock.

Each individual holder of debenture stock receives a certificate stating that he is the holder of a certain amount of stock, and that the redemption of the said stock and the payment of the interest thereon is secured by a deed dated from a certain date, and made between certain parties. Stock certificates may be issued to bearer, but this is of rare occurrence, the rule being that the names of the stockholders are registered. In such a case it may be provided that any portion of the stock may be transferred, or fractions of one pound may be excluded, or it may be stipulated that all sums transferred must be multiples of £5 or of £10, or of any other sum. The possibility of transferring any portions of the stock is one of the advantages of debenture stock as compared with debentures, and probably one of the principal reasons why the issue of debenture stock by companies has become so popular within the last few years. Debenture stock certificates to bearer are subject to an *ad valorem* stamp duty payable by the company. See the books on companies quoted *s.v.* DEBENTURE.

(*b*) Debenture stock issued by a British railway company or other company obtaining a special act incorporating the Companies Clauses Act, 1863, is with the interest thereon a charge on the undertaking of the company, and the interest of such debenture stock has priority over the dividends or interest on any ordinary shares or stocks. If any interest remains unpaid for thirty days after the date on which it is payable, stockholders whose total holding amounts to a certain sum, may obtain the appointment in England or Ireland of a receiver, and in Scotland of a judicial factor, and any stockholder may also recover the arrears by action against the company. The stockholders are not under any circumstances entitled to claim repayment of the principal sum paid up in respect of the debenture stock, and they cannot, under any circumstances, become entitled to the possession of any part of the property of the company. On the other hand it is not in the power of the company to redeem the stock, unless they obtain a special act of parliament for that purpose.

It has been said that "debenture stock of this kind is nothing but preference stock with a special preference" (Court of Appeal in Attree *v.* Hawe, 9 Chancery Division, on p. 349), but this statement was made with reference to a special point, and was not intended to convey the meaning that there is no essential difference between debenture stock and preference stock. This has been pointed out by Mr. Justice Chitty (*in re* Bodman, Law Reports (1891), 3 Chancery, on p. 138); he says: "the holder of debenture stock is a creditor of the company with a security in the assets of the company . . . debenture stock is borrowed money capitalised for purposes of convenience." The fact that debenture stock issued by a British railway company, or other similar company, is never repayable, while the debenture stock of a company incorporated under the Companies Acts must always be repayable, though not necessarily on a fixed date, constitutes a material difference. Stock of the first kind is in the nature of a perpetual annuity, whereas stock of the second kind is a debt secured in the same way as a debt for which debentures are issued.

The holders of British railway debenture

stock receive certificates registered in their respective names, and transfers are made in the same way as the transfer of ordinary railway stock. See the books on railway companies quoted, *s.v.* DEBENTURE, also Lindley on *Company Law*. E. S.

DEBIT. That side of an account on which everything in the nature of a debt is entered. The word is also used to denote the entries so made, *i.e.* a debt. J. E. C. M.

DEBITUM FUNDI (Scot.) "A debt owed by the land itself," in whosesoever hands it may be; a real burden or lien preferable to all rights of the proprietor, and enforceable not only against the vassal himself, but also by a "real action" against the lands themselves. By law the feu-duties and some other feudal duties due to the superior, are in this category; and by agreement, "annual rents," debts secured on land, reserved burdens, and the like may be made *debita fundi*, and may by registration secure a preference postponed to the superior's rights (see POINDING OF THE GROUND). A. D.

DÉBOUCHÉS, THÉORIE DES, generally regarded as the main original contribution of J. B. Say to economic science. This *theory of outlets* or *of vent* affirms that a general glut or general over-production is impossible. If all products could be had for nothing, men would everywhere spring into existence to consume them. Products are bought with other products. Therefore each product is more in demand as other products increase and bid against it. In other words, as the same product constitutes the producer's demand and the consumer's supply, a general excess of supply over the general demand is absurd. Moreover, human desires expand indefinitely. So long as these are unsatisfied there can be no over-production except from lack of purchasing power arising from under-production on the part of the would-be purchasers.

Hence it is concluded that to maximise production is the interest of all; that industry is *soliduire*; and that cosmopolitanism in commerce is true wisdom, imports stimulating the sale of indigenous products. This theory, Say predicted, "will change the politics of the world" (*Traité*, 5th ed. 1826, I. ciii.)

The theory was resisted by MALTHUS and SISMONDI (*q.v.*), but was supported by James Mill and Ricardo, whose friendship grew out of this agreement, as we learn from J. S. Mill (*Principles*, 1875 ed., III. xiv.) The last-mentioned writer's examination of the theory, though enforcing the strength of the main position, leaves still something to be desired. Arguments are used which take no account of the relativity of demand to price, the imperfection of the world market, or the element of time necessary to create new habits of production or consumption or to raise up a new generation of consumers. The case is, however, conclusive against those whose view involves the fallacy of a general fall of values, or who mistake the phenomenon of a commercial crisis, in times of contracting credit, for over-production. The remedy, says J. S. Mill, for "what may be indiscriminately called a glut of commodities or a dearth of money, is not a diminution of supply, but the restoration of confidence."

[For modern opposition to Say's theory, see Uriel H. Crocker, *Excessive Saving*, Boston, U.S.A., 1884, and in *Harvard Quarterly Journal of Economics*, April 1887 and April 1892.—Edward F. Sweet, "Over-Production," *Chicago Times*, 26th April 1880.—Mummery and Hobson, *Physiology of Industry*, 1889.—See also *Report of the Royal Commission on the Depression of Trade and Industry*, 1885, and for alterations in price and standard of value, Appendix B, by R. H. Inglis Palgrave.] H. H.

DE BROUCKÈRE, CHARLES, born at Bruges in 1796, died at Brussels in 1860. One of the most eminent and honest of Belgian politicians. He served from 1815 to 1820 with the army of the Low Countries, and after this engaged in the business of banking. He then commenced his political career as a deputy in the second chamber of the states-general, in which he sat among the opposition. After the Belgian revolution of September 1830, he was appointed a member of the national congress, resisted the republican party, declared himself in favour of a monarchy and of the exclusion of the family of Orange-Nassau from the throne. In conformity with these views he voted for the Duke of Nemours, in opposition to the Prince of Saxe-Coburg; but when the latter was elected king, and reigned as Leopold I., he supported him warmly, first directing the finances, and then acting as minister of war. After holding other offices, he returned, for a period of eight years, to private life, engaged in business, was appointed, in 1847, burgomaster of the city of Brussels, which office is considered equal to the position of a minister of state. He was also elected a member of the chamber of representatives, and held both these posts till his death. Besides this he lectured on economic science, on which his views were so liberal that they included free trade. His only work in economics is called *Principes généraux d'économie politique*, 1851, 1 vol. in 18mo, an able though a short production. A. C. f.

DEBT.

Debit, p. 503.
Debt, Imprisonment for, p. 504.
Debtor and Creditor, Law of, p. 505.
Debtor's Summons, p. 506.

DEBT. A "debt" may be defined as an obligation to pay a sum certain in money, with or without interest. But it is to be noted that,

by English law, when goods are sold, or work and materials are supplied without any stipulation as to price, there is an implied obligation to pay a reasonable price for them. If the parties differ, the amount payable can only be ascertained by litigation, which in substance, though not in form, resembles an action for damages.

Putting aside recognisances, and statutory penalties, recoverable by civil process, debts may be divided into three classes, namely, judgment debts, specialty debts, and simple contract debts. When, by the judgment of a court of competent jurisdiction, a person is ordered to pay money, the judgment creditor may usually enforce his rights either by the process of the court which gave the judgment, or by bringing an action on the judgment as if it were an ordinary debt.

A specialty debt is a debt created by an instrument under seal. Formerly specialty debts had priority over simple contract debts, but recent legislation has now practically effaced this distinction, and the main differences between the two classes of debts consist in this; (*a*) a specialty debt may in general be created without consideration, as for example by a voluntary bond, and (*b*) the period of limitation for a specialty debt is twenty years, while in the case of a simple contract debt it is six years.

Any debt, other than a judgment or specialty debt, whether evidenced by writing or not, is called a simple contract debt. It is to be noted that the term applies not only to obligations to pay arising from agreement between the parties, but to cases where the law implies such an obligation apart from agreement. These quasi-contracts, as they are sometimes called, fall chiefly under two heads. First, when a person is compelled to discharge the liabilities of another, he becomes the creditor of that other person for the money so paid. For instance, if one of two sureties pays the whole debt due from the principal debtor, he can recover the proportionate share from the other surety as a debt. Secondly, when a person has wrongfully received money, the party entitled to it can generally recover it as a debt. For instance, if an account by mistake be paid twice over, the second payment can be recovered as a debt due from the person who received it.

As a general rule debts do not, according to English law, carry interest. The obligation to pay interest arises only (*a*) by agreement, or (*b*) by mercantile usage, as in the case of debts secured by bills or notes, or (*c*) by statute. Scotch law is more favourable to claims for interest, see INTEREST (see also DEBTOR AND CREDITOR, LAW OF; RECEIPT). M. D. C.

DEBT, IMPRISONMENT FOR. Most civilised countries have now got rid of imprisonment for debt. It was abolished in France in 1867, in Belgium in 1871, in Switzerland and Norway in 1874, in Italy in 1877, and in Scotland in 1880. But in England the system is in full force. It is true that in 1869 a statute was passed bearing the title "An Act for the Abolition of Imprisonment for Debt, for the Punishment of Fraudulent Debtors, and for other purposes" (32 & 33 Vict. c. 62), but it appears from the county court returns of 1889 that during the preceding year 201,335 applications were made to commit judgment debtors to prison, 54,995 warrants of committal were issued, and 6429 debtors went to prison. The fact is the act in question merely regulates imprisonment for debt, but in no wise abolishes it (see § 5). Imprisonment on mesne process has been abolished, but when a suitor has recovered judgment for debt, damages, or costs, he has two courses open to him. He may proceed either against the property or against the person of his debtor. If he elects to proceed against his person he takes out what is called a "judgment-summons" calling on the debtor to appear before the court on a day named, to be examined as to his means, and to show cause why he should not be committed to prison for having neglected or refused to pay the sum specified in the judgment or order. The summons may be taken out in the county court, whether the judgment be in that court or the high court. At the hearing, if the creditor proves, or the debtor admits, that the latter either *has or has had* since the judgment the means of satisfying it, the court may order him to be committed to gaol for a period not exceeding six weeks. The imprisonment does not operate as a satisfaction of the debt, but on the other hand the debtor cannot be twice imprisoned for the same sum of money. The debtor can at any time obtain his release by paying the debt and costs. While in prison the debtor, like any other prisoner, is kept there at the public expense. Execution against the person therefore differs from execution against property, for in the latter case the creditor has to pay the costs of the execution if they cannot be recovered from the property of the debtor. When a judgment is ordered to be paid by instalments, default in paying any instalment constitutes a ground for committal. Suppose then a debt of £2 is ordered to be paid by instalments of 4s. a month, a common order in the county courts. Theoretically for this debt of £2 the debtor might be committed ten times for periods of six weeks each. Practically the discretion vested in the court would prevent so harsh an application of the law. It has recently been held that a married woman cannot be committed for non-payment of a judgment debt, for under the Married Women's Property Act, 1882, the contracts of a married woman do not bind her personally, but merely bind her available separate estate if any. By one of the eccentricities of modern legislation a

married woman, who has a husband to rely on, is thus put in a more favourable position than a single woman or widow who has no one to help her. From the figures cited above it appears that not more than 3 per cent of the applications to commit result in the actual imprisonment of the debtor. This result is due to a peculiar mode of administering the act of 1869 adopted by most of the county courts, namely the system of suspended orders. It can best be illustrated by an example. Suppose a workman whose standing wages are 25s. a week is summoned for non-payment of a judgment debt of £2 which is three months old. It is clear that since the date of the judgment he has had more than £2 wherewith he could have paid the debt, but on the other hand he probably cannot pay £2 forthwith. The creditor is entitled to his order of committal, but he has no desire that his debtor should go to prison. His only wish is to get his money. The court therefore makes an order committing the debtor, but directs that the warrant of arrest shall not issue as long as the debtor pays a certain weekly or monthly instalment into court, say 5s. a month. This mode of enforcing the act was probably not contemplated by the legislature, but after being questioned by the court of appeal, its validity has been finally affirmed by the House of Lords.

The policy of the act of 1869 is defended on the ground that without it debts would be practically unrecoverable from the working classes, who as a rule have little or no property available for seizure under an execution. Against this argument it is urged that imprisonment for debt encourages a system of factitious credit which is injurious alike to debtors and creditors. All sound credit should rest on one of two bases, namely property or character. If a man has neither property nor character it is better that he should not be able to obtain credit by what is practically a mortgage of his body. The recovery of debt by means of imprisoning the debtor is usually a tedious and expensive process. The creditor is for a long time kept out of his money, and the impecunious debtor has heavy costs to pay in addition to the debt. The tradesmen who deal with the poor no doubt fix their prices with reference to the difficulty in recovering the money, and the result of the present system is to raise normal prices as regards the honest poor who pay their way. The question of imprisonment for debt was inquired into by a select committee of the House of Commons in 1873, who reported strongly against the existing procedure, and suggested various amendments in the law, but no action has hitherto been taken on their report. It is to be noted that since the Bankruptcy Act of 1883 a debtor can file his own petition, and that as soon as a receiving order is made against him he is protected from proceedings under § 5 of the Debtors Act 1869. The same result follows if an administration order is made by a county court in the case of a small debtor, whose total liabilities do not exceed £50.

[See the subject further discussed in Glasson's *Histoire du Droit de l'Angleterre*, vol. vi. § 296, and *Fortnightly Review*, September 1888.]

M. D. C.

DEBTOR AND CREDITOR, LAW OF. The salient points of the English law of debtor and creditor may be noted under two heads, *firstly*, the rights and obligations of creditors and their debtors; and *secondly*, the means for enforcing those rights and obligations.

When a debt becomes due, it is the duty of the debtor to pay it without waiting for any demand. Hence it has been held that an action may be maintained on a promissory note payable on demand, without showing any presentment to the maker. The control of the courts over costs prevents this rule from working any practical injustice. If no place of payment has been fixed either by custom or agreement, it is in general the duty of the debtor to seek out his creditor for the purpose of paying him, unless the latter be "beyond the seas," that is to say out of England.

In most continental countries a creditor is entitled to draw a bill on his debtor for the amount of his debt, but in England the obligation to accept or pay a bill of exchange only arises from agreement between the parties. It is to be noted that when a man has an account at a bank, the banker is not a trustee of his customer's funds, but the relationship between them is simply that of debtor and creditor, with a superadded implied obligation on the part of the banker to honour his customer's cheques to the extent of the balance to his credit.

A creditor is not bound to give change to his debtor. It is the duty of the latter to tender the exact amount of his debt in legal currency as defined by the Coinage Act, 1870 (see LEGAL TENDER). Hence it follows that the creditor, apart from agreement, is not bound to take a cheque or other negotiable instrument in payment of his debt. Treasury currency notes are legal tender, and so are Bank of England notes except when tendered by the bank itself.

By the common law the relationship of debtor and creditor is regarded as a strictly personal one. Hence, as a general rule, if a third person voluntarily pays the creditor without the debtor's consent or subsequent ratification, the payment is ineffectual. It neither liberates the debtor nor creates any obligation against him. The law merchant has introduced certain exceptions, as, for instance, the payment for honour of a bill of exchange. These exceptions are doubtless borrowed from countries where the rule of the civil law prevails, according to which *debitorem ignarum*,

sive etiam invitum, solvendo liberare possumus. In accordance with the principle that the obligation created by a debt is a personal one, the common law did not recognise the assignment of debts; but now by § 25 of the Judicature Act, 1873, when a debt is assigned absolutely, by writing under the hand of the assignor, and notice in writing is given to the debtor, the assignee is entitled to receive the debt or to sue for it in his own name.

In countries which follow the civil law, mutual debts extinguish each other by what is known as "compensation," but English law acknowledges no such rule. If parties who have cross accounts choose to strike a balance, the balance is recoverable as a debt, but that is by virtue of the agreement. Again by virtue of the Judicature Act 1873, any claim may now be answered by any cross-claim that the defendant may have; for instance, a claim for rent may be met by a counter-claim for damages for trespass, but it is purely optional with the debtor whether he sets it up or not.

There is yet another rule which seems peculiar to the English common law. It has been held that where there is an undisputed debt, payment of a lesser sum cannot discharge the debt, even though the lesser sum be accepted by the creditor in satisfaction of the whole. The alleged reason is that there is no consideration for the abandonment of the balance. The courts, feeling the hardship of the rule, have narrowed its application as much as possible, and have confined it to money payments. For instance, if a creditor, to whom £100 is owing, agrees to take from his debtor the promissory note of a third person for £50 in satisfaction of the debt, the debt is discharged; and it has even been held, in a case of somewhat doubtful authority, that the debtors' own cheque may have the same effect, though a payment by him in cash would not.

Passing now from the creditor's rights to his remedies for enforcing them, the ordinary mode of enforcing a debt is by action. If, however, the debtor has committed one of the overt acts of insolvency known as "acts of bankruptcy," proceedings in bankruptcy may be taken against him. A corporation or company under the Joint Stock Companies Acts cannot be proceeded against in bankruptcy, but if it be unable to pay its debts, the creditor may petition to have it wound up. In the case of an ordinary debtor, if the debt do not exceed £100, the creditor may sue for it in the county court, where the procedure is cheap and summary. If the debt exceeds £100, the action must be commenced in the high court, unless the cause of action has arisen within the jurisdiction of one of the few local inferior courts, such as the Mayor's Court of London, which have unlimited pecuniary jurisdiction within certain local limits. When the creditor has obtained judgment he may enforce his rights in three different ways. First he may under certain conditions proceed against the person of his debtor (see DEBT, IMPRISONMENT FOR). Secondly, he may proceed to realise his debt from the property of his debtor by means of execution against that property, and thirdly, he may by the assistance of the court attach any debt owing by a third person to his debtor.

To facilitate the recovery of debts and liquidated demands in the high court, a useful summary procedure is provided by Order XIV. of the Rules of the Supreme Court. M. D. C.

DEBTOR'S SUMMONS. Under the Bankruptcy Act 1869, bankruptcy proceedings were commonly initiated by what was known as a "debtor's summons." Any creditor for £50 or upwards could take out a summons in the bankruptcy court, calling on his debtor to pay the sum due within seven or twenty-one days, according as the debtor was a trader or a non-trader. If, subject to certain qualifications, the debt was not then paid, an act of bankruptcy was deemed to have been committed, on which a petition might be presented. The system was grossly abused, and a select committee of the House of Commons in 1880 recommended its abolition. The Bankruptcy Act 1883 (now re-enacted with amendments by the Bankruptcy Act 1914) gave effect to this recommendation, and substituted the procedure by "bankruptcy notice" founded on the final judgment of a court of justice, on which no stay of execution had been granted.

A debtor's summons must be distinguished from a judgment-summons, under which a creditor, who has obtained judgment, seeks to enforce execution against the person of his debtor (see DEBT, IMPRISONMENT FOR).

M. D. C.

DEBTS, PUBLIC. In primitive society, where commerce is small and manufactures are scanty, the tendency of both sovereign and subjects is to hoard rather than to invest the surplus products not immediately consumable. The elementary state of credit and the difficulties in the way of the exchange of commodities impel both public authorities and individual members of the community to make provision against special contingencies, and when such provision fails, force is resorted to in order that collective and private wants may be satisfied. As, however, commerce and manufactures expand, consumption becomes easier and more attractive both to sovereign and people, and the means of, and inducement to, profitable investment increase. Under these conditions there is a growing disinclination to do more than provide for the current expenses of the government, and when extraordinary exigencies arise, extraordinary measures for raising the funds have to be resorted

to. These measures are rendered the more easy by reason of the expansion of credit and exchange to which they are in a great degree due. Hence Adam Smith, who treats this phase of the subject at some length, remarks (*Wealth of Nations*, bk. v. ch. iii.): "The same commercial state of society . . . produces in the subjects both an ability and an inclination to lend. If it commonly brings along with it the necessity of borrowing, it likewise brings with it the facility of doing so;" whilst Prof. Adams, in whose work on *Public Debts* the most complete presentation of the economic aspects of the subject of this article is to be found, observes that "the funding system seems to be capable of wide acceptance only among people whose labour is of a high grade of efficiency and who have developed for themselves representative government."

At the outset, borrowing by the state, even when incurred for extraordinary purposes such as war, took the form of a mere anticipation of revenue rather than of permanent indebtedness. In the United Kingdom, in the reign of William III. and the earlier part of that of Queen Anne, various loans were raised on the assumption that they would be discharged out of the proceeds of taxes which were at the same time imposed for periods varying from 5 to 10 years, and it has been and is still the constant practice of the government to borrow in anticipation of revenue, it being practically impossible so to adjust the collection of taxes as to meet at the due dates throughout the year the payments requiring to be made from the Exchequer. The limits within which loans can be contracted under such conditions are, however, necessarily narrow; in our own country the increasing requirements of the government soon led to the adoption of a less onerous system, and, as Adam Smith points out, "taxes which before had been anticipated only for a short term of years were rendered perpetual as a fund for paying, not the capital, but the interest only of the money which had been borrowed upon them by different successive anticipations." When this point has been reached the funding system may be said to attain its full development.

Two of the principal causes which have led to public borrowing have already been alluded to—temporary necessity and special emergency. A third remains—the construction of public works, in some instances the most potent of all. When capital is required to be expended in order to provide works which will be a source of benefit and profit to the community over a long period of years, the taxpayers of a single year are unwilling, and indeed unable, to bear the whole of the burden, and in proportion as the conception of the province of the state is enlarged, the public debt incurred in order to provide the capital requisite for its undertakings is necessarily augmented.

Economists have discussed in considerable detail the advantages and disadvantages of public borrowing, as compared with the only alternative possible under a constitutional government—the increase of taxation. It is urged on the one side that a public debt affords a convenient form of investment, especially to those investors who, desiring full security for their investment rather than a high rate of interest, are anxious to obtain a public guarantee. It has also been shown that a public debt may be made the means of materially assisting the establishment and provision of banking facilities; and, as an argument against the repayment of an existing debt, it has been contended that its pressure "is necessarily decreased from year to year by the gradual depreciation in the value of the monetary unit in which all obligations are expressed," and that even when this cause is not operative "all the practical effects of debt reduction may be realised through the natural growth and prosperity of the nation." None of these considerations, however, appears to outweigh the disadvantages of public indebtedness *per se*, even when it takes the most convenient form which can be devised; but they require to be taken into account in determining whether the creation or maintenance of a public debt is preferable to the retention of existing taxes or the imposition of new ones.

The weight of the intrinsic objections to public borrowing depends to a considerable extent upon the purposes for which debt is contracted. In this connection it is to be noted that many of the objections to the funding system which are pointed out by Adam Smith and other early economists, and their predictions of its disastrous consequences, proceed on the assumption that the contraction of debt by the state implies the destruction of capital, and not its profitable investment. Even, however, when borrowing is resorted to in order to provide funds for the purposes of war, it may well be that the net result to a nation may be entirely favourable, for, as M'Culloch eloquently observes, "the integrity and increase of our dominions, the protection of our rights and liberties, and our triumphs by land and sea, are the real equivalents of the public debt and of all the blood and treasure we have spent in warlike enterprise, and they are quite as ample and conduce as much to our prosperity as a nation as if they had been realised in an increase of population and wealth; no sacrifices can be too great that are required to preserve national security and independence, and a loan expended on armies or fleets employed for such a purpose is quite as well and profitably employed as if it had been laid out on agriculture, or in promoting manufactures or trade."

Prof. Adams, in the work above referred to, discusses the objections to public debts under

the three heads of their political, social, and industrial effects. Under the first he points out that the result of borrowing is to conceal from the nation the full effects of the policy and course of action pursued by the government, an argument which in a somewhat different form is urged by Adam Smith, who regarded the borrowing of money as the removal of an adequate check on the undertaking and continuance of war. It may, however, be observed that if borrowing be not resorted to, the difficulty of providing funds by reason of the impatience of the taxpayer may easily prevent, under a democratic system of government, the adoption of a policy in all respects advantageous. A further political objection presents itself in the case of weak states, the autonomy of which may be endangered by the contraction of foreign loans. Under the head of social effects, the same writer expresses the opinion that public debts "exert a social influence in rendering permanent such class relations as spring from disparity of possessions, and they introduce conflicting interests between citizens." It is, however, to be doubted whether this result of the creation of debt is long maintained when it takes an extremely mobile form, as in our own country.

The industrial effects of borrowing are those which will ordinarily have the greatest influence in determining whether a public loan should be contracted, and on this point Prof. Adams may again be cited. "Public loans influence industrial affairs through the medium of capital, but the character of this influence depends upon the nature of the loan, upon the conditions under which it is contracted, and upon the fund of capital from which it is filled. So long as the placement of a debt by the state does not affect the market quotations of commodities, the full extent of its influence is to divert capital, which might otherwise have gone to extend existing industries, to the purposes of the government. But the moment the state offers unusual inducements the price of commodities is thereby affected. Future loans must therefore be contracted on a rising market, and by taking this step the government enters upon a policy which contains the germ of industrial disturbance and social injustice. . . . At the same time there is a wide margin between a slight increase of the normal rate of interest and an offer of excessive inducements; and although the industrial and financial principles are the same in either case the practical results may be very different. It is therefore, impossible, to determine how far a government is justified in raising the rate on public bonds, unless the probable results of this method of securing money be compared with what must follow from running the taxing machinery at a higher rate of speed." M'Culloch arrived at substantially the same conclusion. "The policy of raising the supplies for a war by means of a loan or by an equivalent increase of taxation, cannot be decided on general principles, but must always be determined by reference to the state of the country at the time. Whenever there is no risk of prejudicing industry by increasing taxation, that plan should be preferred, and although a loan should be required to obviate too rapid an increase of taxation, the inconveniences attending the accumulation of debt are so very great, that every practicable effort should be made to raise the revenue to the highest limit to which it can be safely carried, and to make it defray a part, at least, if not the whole, of the extraordinary expenditure."

As to the manner in which public debts should be contracted, there is now but little difference of opinion amongst economists. It is an axiom that "floating debts should be sparingly used," by reason of the disturbing influence which they exercise upon the money market, and *vice versa*, by reason of the difficulties which a government may experience in keeping such debts on foot. It is also agreed that whenever a debt is large enough, it should take a varied form in order to suit the varying requirements of investors. On this point, however, it is to be observed that it is essential that each class of debt should be large enough to be readily marketable if it is of a negotiable character. The question of whether stock should be issued at par with interest at the full current rate at which the money can be borrowed, or at a discount at a lower rate of interest, has been the subject of considerable discussion, and it cannot be said that any general rule has been laid down. Many investors are very willing to accept a low rate of interest for their money if they see in front of them an increment of value, and it may be important to the borrowing power to satisfy its present requirements at as low an immediate charge as possible. There can be no doubt, however, that the system has frequently resulted adversely to the state. M'Culloch (*Dictionary of Commerce*, art. "Funds") states that "in consequence of the prevalence of the practice, the principal of the debt now existing amounts to nearly two-fifths more than the sum actually advanced to the lenders," and the balance of opinion is now distinctly in favour of the issue of stock at par, wherever possible. The course pursued by the British municipal corporations confirms this conclusion.

Many of the considerations presented with regard to the advantages and disadvantages of borrowing as compared with the imposition of taxation apply equally to the repayment of debt. It is probable that the evil effects of an ill-devised system of taxation altogether outweigh the consequences of the existence of debt, and that surplus revenue may be much more

wisely devoted to the revision of the former than the repayment of the latter. When, however, this has been accomplished the gradual liquidation of the debt increases the financial strength of a country and its ability to meet future contingencies when they arise. This object requires therefore to be kept in view in determining the mode in which public debt is contracted, and it is usually accomplished by the periodical drawing of bonds, or as in our own case by the conversion of debt into terminable annuities. This latter course is materially assisted by the constant growth of the funds coming under the control of the government in the shape of savings bank deposits or moneys in Chancery, which can safely be made the subject of financial operations of the character referred to. In many instances, however, and especially in the loans of local authorities, repayment is agreed to be made *en bloc* at a given date, the necessary funds for the purpose being accumulated in the interim. The rate at which a public debt should be repaid, and the period during which it should subsist must be determined by the general considerations above summarised, but in the case of loans contracted for the construction of public works, especially by local authorities, it is obvious that regard must be had to the character of the works and the length of time during which their full utility is likely to endure.

[Nearly all the general treatises on Political Economy refer to this subject. In addition, Adams on *Public Debts*, London, 1888.—Leroy-Beaulieu, *Traité de la Science des Finances*.—Fenn on *The Funds*, London, 14th ed., 1889, and the articles "Funding System" and "National Debt" in the 8th and 9th editions of the *Encyclopædia Britannica* may be consulted.—C. F. Bastable, *Public Finance*, London, 1903. See also Annuity; Conversion; Funding System; National Debt; and Sinking Fund.] T. H. E.

DEBT, Public, Statement of (Government indebtedness). In the following tables a statement is given of the national debts—(1st) of Great Britain and her Colonies, and (2nd) of all the foreign countries of the world which have created such liabilities. It is impossible to bring all the statements down to a fixed date; but the returns are all comprised within the years 1911-1912 and £8,815,930,670, which is the total of the two tables, may be stated to closely represent the national indebtedness of the world at the close of 1912. Side by side will be found the population of these countries at the same date as nearly as possible, and a statement of the debt per head. But any bald statement of the capital is misleading. Where a debt carries 6 per cent interest it is a far greater burden than where it carries only 2½ per cent, as in the case of Great Britain and some Canadian stock; and the interest is therefore added as a guide to what the burden of the debt really amounts to. But even the interest is not a guide to the burden of a country's national debt. By many countries large sums have been raised for the construction of railways, and some of these public works make a return sufficient to cover the interest on the national debt. The endeavour has been made in cases where the figures are available to show what portion of the interest has been made good by the earnings of reproductive works, and the net burden met out of national taxation. It would occupy far too much space to describe the results indicated. They must be allowed to speak for themselves. In dealing with foreign nations, especially with the Continent of Europe, it has been found impossible in some instances to separate the Revenue from Public works from that obtained from State Domains, Forests, etc. In some cases inconvertible paper currencies are included in the total debts. Amongst the debts have been included the amounts raised by separate states—such as those comprising the United States and the German Empire — but not county or city indebtedness of any description.

As compared with a previous estimate made in 1892 (see art. in First Edition, 1894), when the debts were found to aggregate £6,505,375,562, the increase is shown to be £2,310,555,108. A comparison of the following tables with those given in the first edition of this Dictionary will show that almost all countries have increased their debts. In the ten years 1882 to 1892, the national debts of the world increased by £1,111,000,000. Between 1872 and 1882 the increase was only £789,000,000, between 1862 and 1872 it was £2,000,000,000. There were three great wars between 1862 and 1872, while between 1892 and 1912 several leading countries were engaged in serious warfare, which added greatly to their indebtedness.

[Statistical Abstract of the Principal and other Foreign Countries. Secretary of Legation Reports.—*Almanach de Gotha*, 1892.—*The Statesman's Year Book*, 1892.—Fenn on *The Funds*, 1889 and 1892.—Annual General Report of the Corporation of Foreign Bondholders.—*The Victorian Year Book*, 1890-91.—*The Seven Colonies of Australasia*, 1892 (Sydney).—*The Year Book of Canada*. —Generally the official statistics of foreign countries.]

DEBTS, Great Britain and Ireland, Public, pp. 510, 511. Local, pp. 512, 513. *England and Wales*.—Side by side with the national debt of the United Kingdom a very large amount of debt has been contracted by the local authorities, which should not be lost sight of in any estimate of the public indebtedness of the country.

For outstanding loans of local authorities in England and Wales at the end of the financial years 1874-5, 1886-7, 1898-9, and 1910-11, see next page.

Country.	Population (1911).	Debt (1912).	Debt per Head.	Debt Charge.	Revenue from Invested Funds, Reproductive Works, etc.†	Net Burden of Interest.†
British Empire	No.	£	£ s. d.	£	£	£
United Kingdom	45,662,646	724,806,000	15 15 3	24,500,000	260,582*	24,239,418
Colonies and Possessions						
British India	244,221,377	303,680,788	1 4 6	9,884,000	19,871,777	nil
Straits Settlements (including Labuan)	722,075	6,913,852	9 13 5	94,147	large	*a*
Ceylon	4,106,350	6,130,727	1 9 10	288,875	606,828	nil
Mauritius	375,481	1,290,691	3 5 1	*a*	large	*a*
Seychelles	22,691	13,875	0 12 2	*a*	*a*	*a*
Hong-Kong	456,739	1,485,733	3 5 0	*a*	large	*a*
Commonwealth of Australia						
New South Wales	1,646,734	100,052,635	60 14 11	3,867,017	3,290,720	576,297
Victoria	1,315,551	60,737,216	46 3 0	2,207,232	1,158,757	1,048,475
South Australia	408,558	29,440,113	72 3 1	*a*	large	*a*
Western Australia	282,114	26,283,523	93 4 1	1,101,561	1,896,579*c*	..
Tasmania	191,211	11,302,411	59 3 5	414,255	large	..
Queensland	605,813	47,068,186	77 13 4	1,724,804*b*	1,117,683	606,621
New Zealand	1,008,468	90,060,763	89 6 11	2,656,344	1,197,895	1,458,449
Fiji	139,541	82,815	0 11 10	*a*	*a*	*a*
Union of South Africa	5,973,394	117,260,534	19 12 7	3,970,472*b*	*a*	*a*
Swaziland	99,959	100,000	1 0 0	3,500*b*	*a*	*a*
Nyasaland	970,430	50,000	0 1 0	*a*	*a*	*a*
Uganda	2,843,325	295,000	0 2 0	*a*	*a*	*a*
East Africa	2,402,863	250,000	0 2 1	*a*	*a*	*a*
South Nigeria	7,857,983	8,267,665	1 1 0	228,042	26,271	201,771
Gold Coast	1,501,793	2,469,118	1 12 10	*a*	*a*	*a*
Sierra Leone	1,403,132	1,248,048	0 17 9	61,336	..	..
Dominion of Canada	7,204,838	99,331,136	13 15 9	2,684,681	*a*	*a*
Newfoundland	238,670	5,650,713	23 12 10	*a*	*a*	*a*
West India Islands						
Bahamas	55,944	47,223	0 16 9	*a*	*a*	*a*
Jamaica	831,383	3,843,074	4 12 5	245,535	*a*	*a*
St. Lucia	48,637	142,280	2 17 11	*a*	*a*	*a*
St. Vincent	41,877	50	..	*a*	*a*	*a*
Barbados	171,982	436,900	2 10 9	*a*	*a*	*a*
Grenada	66,750	123,670	1 17 0	*a*	*a*	*a*
Leeward Islands	127,304	266,850	2 2 6	*a*	*a*	*a*
Trinidad and Tobago	333,552	1,045,093	3 2 2	*a*	*a*	*a*
Bermuda	18,994	45,500	2 5 0	*a*	*a*	*a*
British Honduras	40,458	194,541	4 17 6	*a*	*a*	*a*
British Guiana	296,041	884,615	2 19 2	*a*	*a*	*a*
Malta	211,564	79,081	0 7 5	22,596*b*	*a*	*a*
Cyprus	273,964	269,227	0 19 6	*a*	*a*	*a*
Total British Empire	417,559,646*d*	1,658,011,443	3 19 5	..	..	..

* England also receives about £1,400,000 annually from her Suez Canal Shares.
† Approximate figures only. *a* Information unobtainable. *b* Interest only.
c Gross returns from railways. *d* Population of the whole British Empire.

Note.—It is very difficult to state the exact sinking fund of the Home National Debt. Nominally £1,000,000 was so applied in 1914. But a considerable portion of the annual charge on the Terminable Annuities is in reality sinking fund, and out of a total charge of £24,500,000 some £2,000,000 may be applied to reduction of capital.

Year.	Amount of loans outstanding.
1874-75	£92,820,100
1886-87	186,343,678
1898-99	275,327,374
1910-11	540,211,480

The liabilities of local authorities in respect of their outstanding loans had thus increased by £447,391,380, or 480·6 per cent in 1910-11 as compared with 1874-75. Of this increase £93,523,578 falls in the twelve years from 1874-75 to 1886-87, £88,983,696 in the twelve years 1886-87 to 1898-99, and £264,884,106 in the twelve years 1898-99 to 1910-11. The loans raised during the thirty-six years amounted to over £500,000,000. A considerable part has been repaid in that time. It should be remembered that the above loans have been incurred for purposes of public utility, as harbours, docks, piers, waterworks, gasworks, and markets, from which considerable revenue is derived. Others, such as those incurred for schools, though not yielding an immediate return, have been raised for highly useful purposes. The proportion which the local indebtedness bears to the rateable value of the several districts in respect of which it has been incurred varies greatly in

Debts of Foreign Countries.

Country.	Population (1911).	Public Debt (1912).	Debt per Head (1912).	Interest, Debt Charge, etc. (1912).	Income from Invested Funds, Reproductive Works, etc.†	Net Burden of Interest.†
EUROPEAN	No.	£	£ s. d.	£	£	£
Austria	29,003,000	519,631,229	11 0 4	20,278,487	7,700,000	12,578,487
Hungary	21,239,619	274,702,000	12 18 8	12,210,259	25,000,000	nil
Belgium	7,571,387	162,385,545	21 8 11	7,642,435	entirely covered	nil
Denmark	2,800,000	19,716,996	7 0 8	4,554,673	560,000	4,000,000
France	39,601,509	1,071,848,000	27 1 4	50,824,000	2,700,000	..
Germany, Empire	64,925,993	242,743,000	3 14 9	11,825,400	large	..
Prussia	40,165,219	471,443,702	11 17 3	20,517,457	large	..
Bavaria	6,887,291	114,299,000	16 12 10	847,427	1,500,000 ε	..
Saxony	4,806,661	43,445,000	9 0 9	1,939,475	large	..
Würtemberg	2,437,574	31,240,000	12 8 0	1,368,750	large	..
Baden	2,142,833	28,384,000	13 4 10	1,685,302	1,490,000	..
Minor States	3,899,561	75,407,000	19 6 5	a	large	..
Greece	2,800,000	42,827,021	15 5 9	1,536,457	300,000	1,200,000
Italy	34,687,000	537,174,000	15 9 9	18,043,000	2,275,000	16,000,000
Luxemburg	259,891	973,145	3 7 2	439,725	large	..
Montenegro	516,000	390,000	0 15 1	a	a	..
Netherlands	6,114,302	96,954,638	15 17 1	3,153,614	470,000	2,800,000
Portugal	5,958,643	188,986,980	31 14 5	6,915,603	3,200,000	3,700,000
Roumania	7,248,061	65,991,727	9 1 2	3,976,198	1,155,000	2,800,000
Servia	2,911,701	26,362,240	9 1 0	1,295,782	750,000	500,000
Spain	19,588,688	409,250,978	20 17 9	16,420,594	916,000	15,500,000
Sweden	5,604,192	33,478,180	5 19 5	1,615,223	covered	nil
Norway	2,489,309	20,156,000	8 5 2	950,681	1,700,000	nil
Switzerland	3,781,430	9,313,700	2 9 3	251,885	266,160	nil
Russia	167,920,000	945,553,000	5 12 6	42,611,000	100,000,000	nil
Finland	3,140,000	7,053,539	2 4 3	338,964	2,238,000	nil
Turkey	21,273,900	128,834,486	6 1 0	..	..	..
Bulgaria and Eastern Roumelia	4,337,516	24,407,976	5 12 3	1,605,880	a	a
Total European	514,061,380	5,592,953,082	..	..	..	..
AMERICAN						
United States	95,656,000	573,674,774	5 11 11	10,252,800	10,745,000	..
Separate States		96,326,800	1 0 1	a	a	a
Argentine Confederation	7,171,910	109,282,923	15 4 9	6,654,501	a	a
Bolivia	2,267,935	784,008	0 6 10	136,989	a	a
Brazil	24,308,219	136,271,000	5 12 0	6,336,000	a	a
Chili	3,505,317	42,183,952	12 0 8	2,307,117	a	a
Colombia	5,472,604	5,602,686	1 0 5	a	a	a
Costa Rica	399,424	3,433 110	8 12 1	159,386	a	a
Cuba	2,332,990	13,524,000	5 13 6	622,000	a	a
Ecuador	1,500,000	4,513,579	3 0 2	a	a	a
Guatemala	1,991,261	3,523,222	1 15 4	a	a	a
Haiti	2,500.000	7,976,000	3 3 9	576,493	a	a
Honduras	566,017	23,271,656	41 2 4	a	a	a
Mexico	15,115,612	46,174,065	3 1 1	2,557,935	a	a
Paraguay	800,000	2,204,770	2 15 1	a	a	a
Peru	4,906,000	10,920,083	2 4 6	218,754	a	a
Salvador	1,200,000	3,543,297	2 18 4	a	a	a
San Domingo	600,000	3,643,743	6 1 5	296,553	a	a
Uruguay	1,225,914	28,054,796	22 17 8	1,638 731	a	a
Venezuela	2,755,685	7,192,560	2 12 2	215,776 †	a	a
Total American	174,325,788	1,122,101,024	..	..	..	..
ASIATIC						
China	325,000,000	74,446,750	0 4 6	3,352,554 †	a	a
Japan	52,312,068	254,593,000	4 17 3	16,459,658	a	a
Siam	8,117,953	8,000,000	1 0 0	a	large	a
Total Asiatic	385,430,021	337,039,750	..	..	..	..
AFRICAN						
Congo (Belgian)	15,000,000	11,149,888	0 14 10	420,000 †	a	a
Egypt	11,287,359	94,350,000	8 7 2	4,028,000	4,700,000	..
Liberia	1,500,000	325,483	0 4 4	a	a	a
Total African	27,787,359	105,825,371	..	..	..	..
Total Foreign	1,101,604,548	7,157,919,227	..	..	..	..

† Approximate figures only. a Information unobtainable. ε Against Railway Debt only.

different localities. The annual rateable value of England and Wales for the purposes of the poor-rate, according to the valuation lists in force at Lady-day 1913, was £221,011,832.

The relative proportions which the debts of local authorities bore to the national debts at the end of the financial years 1874-75 and 1910-11 are shown by the following figures.

Years.	National Debt.	Local Debt.	Proportion of Local Debt to National Debt.
	£	£	per cent.
1874-5	768,945,757	92,820,100	12
1910-11	733,072,610	540,211,480	73

The following statement shows, so far as it has been found practicable to apportion them, the amounts outstanding in respect of the principal purposes for which the loans of the local authorities had been raised.

Loans outstanding (England and Wales), year 1910-11.

Local Authorities.

Administration of Justice	£940,301
Baths, Washhouses, and Open Bathing Places	3,235,704
Cemeteries	3,028,622
Education (Schools, Appliances, etc):—	
(1) Elementary Education	41,370,651
(2) Higher Education	6,099,671
Electric Lighting	29,681,430
Fire Engines, Stations, Appliances	1,925,249
Gasworks	23,119,160
Harbours, Docks, Piers, Canals, and Quays	72,304,050
Highways, Bridges, and Ferries	59,502,561
Hospitals	5,841,792
Housing of the Working Classes	10,880,962
Lighting Highways, etc.	189,670
Lunatic Asylums	10,885,767
Markets	7,329,207
Parks, Pleasure-grounds, and open spaces	8,574,665
Police Stations and Gaols	1,877,266
Poor Relief (Workhouses, Infirmaries, Offices, etc.)	12,283,844
Private Street Works and other works of private improvement	1,336,435
Sewerage and Sewage Disposal	42,322,260
Small Holdings and Allotments	1,853,139
Tramways and Light Railways	36,419,547
Unemployed Workmen Act, 1905	28,028
Valuation	1,424
Waterworks	128,687,495
Other Works and Purposes (including destruction of house refuse)	26,598,708
Unapportioned Loans	3,893,872
Total	£540,211,480
Amount remaining at the end of the year 1910-1911, in sinking funds and similar funds, towards the repayment of the part of the total entered in column 4, which is repayable by means of those funds	£21,595,096

The local taxation returns from which these figures are obtained relate to the accounts of the local authorities of England and Wales. These authorities are very numerous.

During the year 1910-11 the accounts of the following local authorities were audited by district auditors: 62 County Councils; 29 Metropolitan Borough Councils with the Corporation of London; the Managers of the Metropolitan Asylum District; the Metropolitan Police Authority; 1136 Town Councils; 666 Rural District Councils; 7073 Parish Councils and Parish Meetings; Overseers of the Poor for about 14,553 Parishes; 653 Boards of Guardians; 56 Authorities for the Management of Harbours, Docks, Piers, Canals, and Quays (including the Port of London Authority); and 1384 Miscellaneous Authorities. Total—25,614.

The management of the local debt of the country is thus divided between a vast number of persons, and, as is usually the case where individual responsibility is lost sight of, administration is lax. For the system of administration, see LOCAL GOVERNMENT.

Loans outstanding (Scotland), 1911-12.

Local Authorities.

Revenue-producing Undertakings:—	
Gas and Electricity Supply	£10,265,149
Tramways and Light Railways	4,389,877
Water Supply	12,787,161
Markets	418,184
Slaughterhouses	319,973
Public Baths and Washhouses	299,996
Working-class Dwellings and Lodging-Houses[1]	2,169,675
Burial Grounds	211,355
Harbours and Ports	12,877,591
	£43,738,961
Common Good (not falling under other heads)	644,652
Non-Revenue-producing Services:—	
Poor Relief	939,172
District Lunatic Asylums	1,538,168
Education	6,648,030
Cleansing	420,529
Sewers, Drains, etc.	3,968,525
Hospitals	1,236,582
General Sanitary Operations	59,446
Roads, Streets, and Bridges	2,051,195
Watching, Police Stations, and Prisons	383,240
Public Libraries	87,681
Sheriff Court Buildings	6,602
Public Lighting	67,693
Fire Brigade	131,446
Public Parks, etc.	1,109,354
Buildings (not allocated to other Heads)	2,186,133
Distress Committee under Unemployed Workmen Act, 1905	11,611
District Fisheries	405
Heritors, for Ecclesiastical Purposes	13,345
Other Purposes	1,009,552
Total	£66,252,322

[1] Erected under the Housing of the Working Classes Acts and under Local Acts.

Heritors, for Ecclesiastical purposes	£13,345
Other purposes . . .	1,009,552
	£66,252,322

The rateable value of Scotland for 1912 was £32,983,165.

Loans outstanding (Ireland) 1911-12 :—

Local Authorities.

Councils of Counties . . .	£431,743
Lunatic Asylums . . .	1,230,379
Town Councils	7,462,925
Commissioners of Towns . .	1,171,795
Commissioners under Towns Improvement Act . . .	1,121,546
Belfast City and District Water Commissioners . . .	1,898,723
Joint Boards for Sewerage, Burial, Port Sanitary, and other purposes	243,552
Rural District Councils . .	6,769,765
Boards of Guardians . . .	362,926
Harbour Authorities . . .	3,431,977
	£24,125,331

The local debt of the United Kingdom was thus, at the dates mentioned, as follows:

England and Wales, 1910-11	£540,211,480
Scotland, 1911-12 . . .	66,252,322
Ireland, 1911-12 . . .	24,125,331
	£630,589,133

This amount should be added to the National Debt in estimating the indebtedness of the country. The Local Debt bears now a proportion of about 88 per cent to the National Debt and is continually increasing. Other countries show the same tendency. According to the *Statesman's Year Book*, 1913, the debt of the French *Communes* was more than £170,000,000 in 1910—including Paris. The debts of that city alone were over £100,000,000. The departmental debt stood at over £36,000,000 in 1908. The local debts of the United States (of States, Counties, etc.) aggregated $1,865,000,000 (£373,000,000) in 1902. The growth of debts of this description is rapid, and no very accurate general statements are attainable.

[Sir S. H. Northcote (Lord Iddesleigh), *Twenty Years of Financial Policy*, App. B, p. 398, London, 1862.—R. H. Inglis Palgrave, *The Local Taxation of Great Britain and Ireland*, London, 1871.—G. J. Goschen, *Reports and Speeches on Local Taxation*, London, 1872.—Essays edited by J. W. Probyn on *Local Government and Taxation in the United Kingdom*, London, 1882.—Wright and Hobhouse, *Local Government and Local Taxation*, London, 1884.—C. F. Bastable, *Public Finance*, 1903, Bk. v. ch. viii.—Reports of the Local Government Board.—Local Taxation Returns (Scotland).—Local Taxation (Ireland) Returns.]

DE CARDENAS DI MAQUEDA, Diego Raffaele, lived in the second half of the 18th century. He belongs to that set of people who, if two are discussing what four and four is, and one says "eight" and the other "ten," will drop in an intermediate opinion, and think it might be "nine." Liberty of commerce, particularly of corn, is wrong, so is state interference; the truth is, of course, between the two—a little liberty and a little regulation by the state. For De Cardenas, the causes of dearth in the kingdom of Naples are three: scarcity of production as a rule; large harvests exceptionally; then government interference. The one only remedy in his opinion is the creation of public store-houses, and the giving power to the government to decide annually what portion of the harvest might be exported. The corn in the public store-houses ought to be saleable by a system of warrants.

The title of his work is *Governo economico intorno ai grani*. Napoli, presso Gaetano Tardano, 1784. M. P.

DECENTRALISATION. Few terms are used more at random or are harder to define than decentralisation. It is the reverse of Centralisation (*q.v.*) If centralisation be defined as the centring of all the powers of government in the hands of a single person, or body of persons, and presumably in a single place, namely the capital of the state, decentralisation may be defined as the distributing the powers of government among various persons or groups of persons, and presumably in various places of which the capital is only the most important. Complete centralisation and complete decentralisation are alike impossible. Complete centralisation is impossible, because the central authority must under all circumstances leave much to agents and subordinates, and cannot wholly deprive them of a discretion in executing their functions. Complete decentralisation is impossible, for this would imply the perfectly independent action of many authorities, in other words the dissolution of the body politic. The decentralisation which is possible without destroying the state may take different forms. The functions of government are distinguished as legislative, judicial, and executive or administrative. All these functions, or only one or two of them, may be decentralised. All are decentralised to a considerable degree in such a commonwealth as the United States of America. Legislation is centralised in most states which are not federal, *e.g.* in the kingdom of Italy or in the French republic. Administration is decentralised in England to a far greater degree than in France, since English local authorities enjoy a far larger independence than do French local authorities. On the other hand the administration of justice is far more centralised in England than in France. By means of the system of circuits a very small number of superior courts has been made to serve the wants of the whole kingdom. In France, under the monarchy, there were

thirteen parliaments or high courts of justice, and although these have disappeared, the number of courts and of judges was much increased in the nineteenth century. Thus we see that it is possible for different functions of government to be decentralised in different states.

Again the political significance of decentralisation differs according to the nature of the function decentralised. Of all the functions of government, legislation is the most momentous. Its centralisation is therefore intimately connected with the unity of the state. The legislative decentralisation in federal states, arises from the fact that these are aggregates of smaller states, which, although willing to combine for certain purposes, are unwilling to forego individual existence and at least nominal sovereignty. Judicial decentralisation usually owes its origin to the desire for cheap and speedy justice, which can be had only by bringing a court of justice within convenient reach of every one who wishes to go to law. Administrative decentralisation usually arises from a totally different impulse, from an instinct of self-government, a desire to execute the laws for oneself rather than to have them executed by officials.

The good or bad consequences of decentralisation differ with the different modes of decentralisation, as well as with the circumstances of each community. Legislative decentralisation is seldom strongly desired or long maintained, unless in states spread over a vast area like the British empire or the United States, or divided by differences of race or religion like the Austro-Hungarian monarchy or the Swiss republic. Legislative decentralisation has the advantage of allowing a freer play to national or quasi-national characteristics. It has, however, the disadvantage of leaving the less civilised parts of a state to persist in their barbarism. It has also, in states under popular government, the disadvantage of opening a field to politicians of low moral and intellectual type. Judicial decentralisation is good in so far as it renders justice cheap and rapid, but bad in so far as it tends to produce judges undistinguished either for learning, for ability, or for character. Few states have attained the right medium in judicial decentralisation. In England it has not been carried far enough; in France and in America it has been carried much too far. Administrative decentralisation is good in so far as it places the administration in the hands of those whom it immediately affects, calls forth their public spirit, and exercises their political capacity. It is bad in so far as it entrusts administration to men who have not competent intelligence or are not conspicuous enough to fear public opinion. In short, decentralisation is good, not as an ultimate end, but as a means of good government and of national training. Its effects are strictly relative to all the conditions of the state decentralised. In what directions and to what extent decentralisation should be carried in any given commonwealth, can be determined only upon mature examination of all the circumstances and cautious trial of what is possible. There are few general propositions on the subject which cannot be shown to be unsound or at least incorrect by familiar historical instances.

[Upon the theory of this subject the reader may consult De Tocqueville's works, especially *De la Démocratie en Amérique*, and Mill's *Representative Government*; for illustrations of the working of decentralisation, Bryce's *American Commonwealth*, —especially the chapters relating to the state and municipal authorities; for a statement of the degree of administrative decentralisation now existing in England, the volumes on Local Government and Poor Relief in the English Citizen Series.]

F. C. M.

DECIMAL SYSTEM (Coinage, Weights and Measures). Viewed from an economical standpoint, the non-adoption in a compulsory manner of any decimal or metric system of current money, weights, and measures, throughout the British Empire is one of the most glaring examples of national waste, financially and educationally, that the spirit of unwillingness to face the trouble of a change from old ways has ever inflicted. Over and over again this has been pointed out to parliamentary committees, to successive prime ministers, chancellors of the exchequer, presidents of the board of trade, and other high executive functionaries, but in vain so far as any practical action is concerned. Not only scientific men and professors, mathematical and politico-economical, but commercial men and chambers of commerce, and educational experts at home, and British consuls abroad, have urged in the most convincing manner that our weights and measures and money are, as a whole, utterly unintelligible to the large majority of foreign persons with whom it is our desire and interest to further extend our trade, and that this renders English price lists and circulars a mere dead letter to many who might otherwise become customers, and greatly handicaps British industries in export trade. It has also been fully demonstrated that the loss of valuable time, and the imperfect intelligence developed, by teaching the young an antiquated non-decimal system, is a fearful extravagance even in a country like ours where the State can afford fifty millions a year in the cause of education, some considerable part of which would be saved if a proper decimal system were substituted for the present effete and unscientific want of system. If such a change be adopted by the legislature, within a very limited time there would gradually be no necessity to teach, in public or other schools, the present puzzling, because incoherent with each other, denominations of money, weights, and measures that are

behind the age and internationally discredited. Our space does not admit of more than a few remarks under each head of importance in any comprehensive view of this question.

I. *Origin of the decimal system.* Our fellow-subjects in Hindostan were the precursors of the Arabians, and it is believed also of the Chinese, in the discovery and use of the decimal system of notation. Writers of authority on the early history of mathematical science concur in remarking that the Arabians, who were the real introducers of the system into Europe, borrowed it from the Hindoos. In Arabian arithmetical works which date back more than a thousand years the decimal system is called the Indian method of computation, the Hindasi, or Indian arithmetic.

II. *Use of the system in ancient times.* So far as Europe is concerned it was not until the close of the 18th century that any effective decimalisation of coin, weight, or measure took place. In fact the theory itself of decimal fractions was unknown until nearly the end of the 16th century. Calculations of the value of annual rents or of capital sums, receivable for a certain term of years or at the expiry of a given time, at any particular rate of interest, or, in other words, the ascertainment of their discounted present worth, had continued to be attended with so much complexity that the search for some remedy for this led to more easy and effectual means of computing such values being sought by Simon Stevin of Bruges. This illustrious man of science invented the theory of decimal fractions, in the construction of tables showing the values of such annuities and periodical payments; and with far-seeing foresight predicted the enormous boon his new-found science would prove to mankind, in practice as well as theory, for all future time. The discovery was first printed in Flemish and in French some three years after the tables. In French it is included in the second, but separately-paged, part of his duodecimo volume on arithmetic, printed at the press of Christophe Plantin, at Leyden, in 1585. The fame and practical utility of "*La Disme*" or "*De thiende*," as Stevin entitled it, echoed throughout Europe. In no country was it better welcomed than in England, or received earlier attention by way of translation and of extension. In this treatise it was suggested that not only all weights and measures should be decimalised, but money also, by the latter being struck in future in various countries into "commencements," Stevin's term for units, and ther subdivided into "primes" (tenths); "secondes" (hundredths); "tierces" (thousandths); and so on. This was tantamount, so far as England was concerned, to taking the pound sterling as the unit or *commencement*, the florin or two-shilling piece as the *prime* or tenth of the unit, the 10 mil piece or cent as the *seconde* or hundredth of the unit, and the 1 mil piece as the *tierce* or thousandth of the unit. All this is practically identical with the pound and mil scheme, so well known to the British parliament and public at the present date.

At the beginning of the 16th century, it is well evidenced by the book on arithmetic by Cuthbert Tonstall, bishop-elect of London, printed in 1522 at London and Paris, that not only in England and France commercial accounts were kept according to a vigesimal and duodecimal subdivision of pounds and livres into twenty shillings or sols, and of shillings and sols into twelve pence or deniers, but that such was the general practice amongst the merchants of other commercial states of Europe. And so it continued in France until the era of the great revolution. But that from that time until now France and every other country, except England, should have one by one altered to a decimal system is the most undeniable proof that the advantages of a decimal system over all others must have made themselves felt and understood and acted upon by all except our own country.

III. *The decimal system in France.* Although the United States of America had decimal subdivisions of the dollar into cents and half cents, by its legislation in 1786, whilst the great metric reform in the coinage of France was not made before 1791, the change by France from her old vigesimal and duodecimal division of the livre tournois or old franc into the new decimal and metrical franc and centimes, has been the real turning-point whereby all other European countries except our own have been led to decimalise their coinage either wholly or in part. Those which, like the several nations comprised in the Latin monetary union, have adopted the French coinage system in its entirety, have of course the full advantage of a wholly homogeneous system wherein weights of coin and all other weights and measures have a definite mutual scientific relation to each other. But even those which, like the German empire or Russia, have merely decimalised a not strictly metric unit, as for instance the mark or rouble, have derived much substantial advantage from the substitution of decimal for other systems.

IV. *History of the decimal movement in England.* This country was specially, indeed exclusively, invited by the French government at the very inception of the idea in 1790 to send commissioners to Paris to join with theirs in the metric and decimal reform. The antagonism to almost anything French which prevailed here at the time prevented us from joining this movement, much to our national loss, as it has retarded for more than a century our participation in its advantages. Let us hope that the twentieth century, during the remainder of its course, will not find our executive of the same slow and halting minds as we shall presently show they were in the

last century. It would be well, with the present progress of education, that they should approach this question with a greater disposition towards securing uniformity with the more scientific theory and practice of other great nations which have long experienced the benefits that accrue from it. The matter has in the meanwhile been before the English commercial and scientific world, and the House of Commons, over and over again. So early as in 1824, when the anti-Gallican spirit had begun to tone down, Sir J. Wrottesley (afterwards Lord Wrottesley) moved in the House of Commons for inquiry into the possibility of coining the subdivisions of the pound sterling decimally, that is, into double shillings or florins, and into 1000 farthings or mils, instead of 960 farthings as heretofore. The government rejected the plan as inconvenient, although they admitted its advantages. In 1841 royal commissioners were appointed to restore the standards of weight and measure destroyed at the fire which burned down the houses of Parliament. They reported unreservedly in favour of a decimal subdivision of the pound sterling, and upon the facility of interposing between the pound and the shilling a new coin equivalent to two shillings, and of considering the farthing, now passing as the $\frac{1}{960}$th part of a pound, as the $\frac{1}{1000}$th part of that unit, of establishing a coin of value equal to $\frac{1}{10}$th part of the pound, and of circulating, besides these principal members of a decimal coinage, other coins bearing a simple relation to them, including coins of the same value as the present shilling and sixpence. In 1843 a second royal commission, consisting of the same members as the former one, with the addition of a few more scientific men, was appointed. They proposed that the recommendations of the first commission should be carried out. The government however shelved the matter, and took no action whatever. In 1847 Sir John Bowring moved in the Commons for an address to the Crown in favour of the coinage of silver pieces of $\frac{1}{10}$th and $\frac{1}{100}$th of the pound. The government fell in with this view, but in a tentative manner only. They came to a resolution, and acted upon it, that the first step in the decimal system should be to establish a coin equal to $\frac{1}{10}$th of a pound. This was the origin of the modern English florin, stamped *one tenth of a pound*, the mintage of which was immediately commenced and has continued until now. In 1853 the commissioners appointed ten years before wrote to Mr. Gladstone, then Chancellor of the Exchequer, strongly urging the government to issue coins related to the millesimal subdivision of the pound sterling, and of the value of $\frac{1}{1000}$th, $\frac{2}{1000}$th and $\frac{4}{1000}$th of a pound (differing little from the farthing, the halfpenny, and the penny), and that these might be extensively used by the public without present inconvenience, while the inscription of their values, as estimated in the decimal scale, would afford the means of shortly introducing that scale throughout the entire system. These were sensible suggestions and about the best that can now be offered. They admit, however, of one important improvement which we have personally repeatedly urged, namely, that the coinage of the new farthing (one mil), the new halfpenny (two mils), and the new penny (four mils); should be struck in *nickel*. A small-sized, unmistakably distinct series of new coins of that metal would obviate all confusion or trouble with the concurrent old bronze coins, for such time at least as the latter might have to circulate with the new nickel coins until the bronze coins were called in. A transition period would have to be faced, and it would practically decide in which direction the reform is to work, by the voice of the public, based on the adjustment of its common wants in which every one is interested on both sides of the question, as debtor and creditor, consumer and producer, of commodities and conveniences measured by the penny and its subdivisions. The great question would be whether penny fares and postages and the price of any article, or service, now measured by the penny or $\frac{1}{240}$th of a pound, should be measured in future by the 4 mil piece or $\frac{1}{250}$th of a pound, or by the 5 mil piece or $\frac{1}{200}$th of a pound. The halving and quartering of the 5 mil piece present awkward fractions, but the 4 mil piece with its perfect halving and quartering is dynamically equally convenient with the present penny, and it has the positive advantage of tending to economy by expenditure of $\frac{1}{250}$th, instead of $\frac{1}{240}$th part of a pound, often answering the same purpose, and preventing waste by its more minute subdivisions. Mr. Gladstone, in 1853, declined to act upon the recommendations of the commissioners, but consented to a select committee on decimal coinage. The twenty-five witnesses examined were unanimous in recommending it, and, with one exception, supported the pound and mil scheme. The committee itself reported that having well weighed the comparative merits of the existing system of coinage and the decimal system, and the obstacles which must necessarily be met with in passing from one to the other, they desired to repeat their decided opinion of the superior advantages of the decimal system, and to record their conviction that the obstacles referred to are not of a nature to create any doubt of the expediency of introducing that system as soon as the requisite preparations shall have been made for the purpose by means of cautious but decisive action on the part of the government. Our readers should note this well-advised verdict, that after weighing the advantages and disadvantages as between the present vigesimo-duodecimal coinage and the proposed decimal coinage, they pronounce, as

we take it any man of practical and theoretical knowledge would do, in favour of the decimal system, so that, as we have now got a good many years more education into the understandings of our people than when the commissioners met in 1853, it may be taken for granted that they were right in their view. But it neither pleased Mr. Gladstone nor his government, and the taking of any action by them was the last thing thought of in appointing the commission. The public had, however, even in 1853, its attention so roused by the favourable report of the select committee that all kinds of rival plans were submitted for discussion at meetings of societies and in printed pamphlets. There was so much doctrinaire attachment still existing even to the last thread of the strange web of our singular coinage system, that champions set forth the existing farthing, halfpenny, penny, ten pence, twenty pence, four shillings, eight shillings, crown, ten shillings, even the long-abandoned guinea, as better bases than the pound sterling in a decimal system. Even the American dollar and the French franc had their advocates. The farthing, halfpenny, penny, and the ten-penny schemes were perhaps the strongest-supported of these opposition methods, but all four of them fail by disturbing the pound sterling to an impracticable extent, as they make this time-honoured unit change into one of £1 : 0 : 10, instead of, like the pound and unit scheme, leaving it quite undisturbed. In 1854 the late Sir William Brown of Liverpool, a practical commercial man, after having well considered the question in concert with the "Decimal Association," of which he was chairman, and amongst whose members were the most accomplished men of the day in trade as well as in science, moved three resolutions in the House of Commons: (1) That in the opinion of the House, the initiation of the decimal system by the issue of the florin has been eminently successful and satisfactory. This was carried by 135 to 36. (2) That a further extension of the system will be of public advantage. Carried unanimously. (3) That an humble address be presented to her Majesty to complete the decimal scale with the pound and florin, as suggested by two commissions and a committee of the Commons, by authorising the issue of silver coins to represent the value of the one-hundredth part of a pound, and copper coins to represent the one-thousandth part of a pound, to be called cents and mils respectively, or to bear such other names as to her Majesty may seem advisable. This was withdrawn, as, with its usual tactics on this question, and on the then alleged interests of the poorer classes, and other such plausible pretexts, but really with the view of again strangling the reform, the government agreed to appoint a royal commission, which consisted, in the result, of three men being appointed commissioners who were bitter enemies to any change, two of them, Lord Overstone and Mr. Hubbard (afterwards Lord Addington) being, to our certain knowledge, given to saying that they had made their money, as bankers and merchants, under the old system, and that as that was good in the past, it would be good enough in the future. The inevitable result of the commission, notwithstanding they had the testimony of men of advanced scientific intellect, and of high commercial reputation, before them in favour of the decimal system of coinage, and especially of the pound and mil scheme, was unfavourable. The royal commission arrived at twelve, on the whole, antagonistic resolutions. It was, however, admitted that the pound and mil scheme is the only form in which, under the then state of public feeling in this country on the question, the introduction of the decimal principle into our coinage could be contemplated with any reasonable probability of sufficient support. It was also alleged that there appeared to be no approach to unanimity of opinion, on the question of the introduction of decimal coinage, in the commercial or other classes of the community. This is, however, only the usual stereotyped sort of phrase in which governmental *non possumus* is wont to be wrapped up. But if we are to wait until the *plebs* move as one body in such a cause we may indeed sit still and await the Greek kalends. Light must be diffused upon it, but the reform is practicable over, and not by, the heads of the million. The "Decimal Association," founded to fan the sacred flame of the movement in its favour, faded out of view by the removal through death of such active friends of it as Sir William Brown, Professor De Morgan, Sir John Bowring, etc. Then on its dissolution another body, with like objects, the "Metric Association," was founded, and although neither money nor pains were spared by its members, of whom the writer is one of the few survivors, in educating the public to the advantages of the decimal and metric systems, by meetings, deputations, pamphlets, and conferences of all kinds with educational and scientific notabilities, still, that association also came to an end, as human nature tires at last in the thankless task of pushing forward reasoning on subjects of argument that are necessarily, in the order of things, abstract and theoretical in form, although they are, in this particular instance, also both real and practical and within the possible range of not very distant adoption. On the ruins as it were of the first two associations, a third "Decimal Association" has been founded, and has succeeded in gaining a more influential co-operation from the chambers of commerce than was formerly possible. It remains to be seen if it can attain its objects better than its predecessors, the associations of the past generation.

It has this advantage over them, that public education of the masses has now made vast progress, and places the latter in a far better position to accept and welcome a decimal reform than when some of us laboured in the same cause in years long gone by. It would seem, notwithstanding, that although individuals may improve in their grasp of the question, ministers do not. A Palmerston, a Gladstone, or a Goschen are all much the same in their desire to put a spoke in its wheel, which may pass on the burden and responsibility of the change to some distant future. Having attended all the deputations in a long series of years which have ventured to trouble the Treasury and Board of Trade with the expression of wishes for present action upon it, we can say we have never discerned even the faintest glimmer of sympathy, in any minister, for the movement. If it were felt in their inner non-official conscience, it was stifled by the knowledge that not only would the cry of reform to a decimal system, either of coinage or of weights and measures, or of all of them, gain them no political votes, but perchance might lose them a few, from the feeling that it would cost the masses trouble and thought, and the collecting and spending branches of the executive the same, and some ingenuity of arrangement besides, if any change in the present antiquated system be brought about. There is unfortunately an excess of timorousness here. If actual experience be a guide, the example of a great country like the German Empire having decimalised its coins, weights, and measures, within quite recent years, proves that a nation, certainly not better if so well educated as England in these days, can carry out such a reform in a limited space of time without any real difficulty, and much to its advantage both in the multifarious daily dealings of home life and in its trade intercourse with the rest of the world. F. H.

DECIME. French bronze token coin of the nominal value of 10 centimes, or one-tenth of a franc. Weight 10 grammes or 154·3 grains. English value ·96 penny. F. E. A.

DÉCIMES. In France, as in other countries of Europe, the clergy long contended for the privilege of exemption from taxes. It was a favourite and frequent assertion that they owed nothing to the state but their prayers. The kings were naturally unwilling to dispense with the contributions of the wealthiest corporation in the realm. From the time of the crusades the clergy were frequently induced or compelled to make occasional grants to the crown, usually for some definite object, and often sanctioned by the pope. It was not till the middle of the 16th century that these grants, under the pressure of Huguenot schemes of confiscation, became permanent and regular taxes. In 1561, by the contract of Poissy, the clergy undertook to pay 1,600,000 livres a year for six years. This contract was renewed in 1567, and ultimately the *décimes*, as they were called, became a regular payment, granted every ten years by a *grande assemblée* of the clergy, attended by four deputies from each province. To settle all disputes about the assessment and collection of this payment a *bureau général des décimes* was erected in 1580 in each of the eight metropolitan sees of France.

Though the consent of the clergy to the grant of taxes became more formal than real, they retained the assessment and collection in their own hands. Necker goes out of his way to praise the system they had adopted in the 18th century. The *décimes* formed a direct tax upon all clergy except the charitable orders. For the purposes of assessment the clergy were divided into eight classes, in which attention was paid to other considerations than mere difference of income. Thus the first class was composed of the non-resident officials such as the abbés and secular priors; whereas the archbishops and bishops only came in the second class. The other classes were mainly arranged according to income, the lowest consisting of curés with 500 livres a year. The first class paid a fourth of income, the second a sixth, and so on down to the last, which paid only a twenty-fourth. But the arrangement was not strictly carried out, and the collegiate clergy succeeded in throwing an ever-increasing burden upon the curés.

The *décimes* were not paid by the *clergè étranger*, *i.e.* the clergy in the provinces added to France in the 17th and 18th centuries. In four of these provinces the clergy paid the ordinary secular taxes, and in the rest a composition for them.

[Necker, *De l'administration des finances de la France*, tome ii.—Gasquet, *Précis des institutions politiques et sociales de l'ancienne France.*] R. L.

DECKER, Sir Matthew (1679-1749), merchant, and economic and trade writer, was born in Amsterdam and came to London in 1702. His business life was eminently successful, leading the way to great wealth and many honours. He was a director of the East India Company, member of parliament for Bishops Castle, high sheriff for Surrey in 1729, and was created a baronet 20th July 1716. His estates were large, and he is reputed, by mistake, to have been the first to produce pine-apples in England, one of which was served up at a great banquet at Richmond when he entertained George I.

His importance as a writer rests on two treatises:—

1. *Serious Considerations on the several high duties which the Nation in general, as well as Trade in particular, labours under, etc., with a proposal for preventing the removing of goods, discharging the trader from any search, and*

raising all the Publick Supplies by one single tax. 1743 (name affixed to 7th edition 1756).

2. *An Essay on the Causes of the Decline of the Foreign Trade, consequently of the value of the lands in Britain, and on the means to restore both.* 1744 (said to have been begun 1739).

Decker's authorship of the last-named treatise has been impugned by M'Culloch on grounds both external and internal. On the authority of Fauquier, *Ways and Means*, p. 56 (1756), he assigns it to Richardson. He further considers the dissimilarity of the systems respectively expounded as evincing an obvious difference in authorship. With regard to external evidence it may be noticed that the evidence rests on the assertion made by Fauquier which is followed by Chalmers in 1782. Against this may be placed Postlethwayte's authority (*Great Britain's True System*, pp. 163-175); a letter from Lord Townshend to Tucker speaking of the treatise as Decker's in 1752 (*Hist. MSS. Com. Report*, xi. App. 4); and lastly, the 2nd edition printed in Dublin in 1749, which has Decker's name on the title page as author.

Turning to the question of internal evidence, it is necessary to point out that there is very little ground for M'Culloch's observations with regard to incongruity. So far, indeed, is this from being a remarkable feature that the opposite may rather be said to be the case, the scheme expounded in the second treatise, of general licenses for consumption, being an expansion of the scheme of particular licenses for the consumption of tea, treated of incidentally in the first (*Serious Considerations*). The tone of the two is similar, and the grievance complained of the same.

To sum up the matter it may be said that the internal evidence is strongly in favour of the two treatises being written by the same man, and as there is no ground for supposing that Decker did not write the *Serious Considerations*, etc., a work always attributed to him, he must be credited with the authorship of the second treatise also, unless the external evidence be directly opposed. So far, however, is this from being the case that its balance is largely in his favour.

Next, we may turn to the contents of these two works. The first, the *Serious Considerations on the High Duties*, etc., opens with long comments on the inducements offered by heavy custom duties to smuggling ("running"), which will take place in defiance of all attempts at suppression. Such a condition of things bring about two chief evils, civil disorder and perverted morality. Decker then notices the great advantage which would be brought about by a repeal of the import duty on tea, and the substitution of a license duty on households wishing to consume tea. But the great scheme developed in this treatise consists in the replacement of all custom duties by an excise on houses. This he would impose in proportion to the rating, with total exemption for the poor. Its chief advantages are, he urges, (1) just and certain incidence, (2) convenience in time of collection, (3) economy. He thus forestalls the four canons of taxation enunciated by Adam Smith.

The second work, *Decline of the Foreign Trade*, is in every way more important than the foregoing. While proceeding on the same lines and aimed at the same evil, it has a wider and more liberal scope. It seeks to attain its end by measures which would affect the conduct of trade throughout the whole kingdom. Although the title is pessimistic in the extreme, it must be observed that the drift of the whole treatise is rather to show the possibility of improvement than to assert any *absolute* decline. In other words England might be made much greater than she is. At the outset he has to confront a particular aspect of the question dealt with in the foregoing work. The proposal to abolish customs and to make England a free port was met by the objection that such an alteration would destroy the value of the land. This he desires to controvert, and in order to do so really divides his work into three parts. The first part is devoted to a detailed criticism of the fiscal difficulties under which England is labouring; the second part to showing the intricate connection between the trade of a country and the value of the land; while in the third part Decker displays the great sources of wealth and prosperity possessed by England, and shows how the references he suggests would permit her to avail herself of these, her natural strength. Some attention must be paid to each of the foregoing.

The first part treats of the causes of difficulty. These are (1) present taxes, (2) monopolies, (3) ill-judged laws, (4) heavy burden of the national debt. It may be noticed that he criticises the East India Company with great severity, and urges very strongly the repeal of the navigation laws which have, he says, evil effects on trade and shipping alike. The criticisms and complaints comprised under the foregoing headings group themselves round two great matters of grievance:—

(*a*) The undue and artificial exaltation of certain branches of trade.

(*b*) The enhancement of the price of labour.

In the second part, Decker claims that the value of the land is diminished by what foreigners take from others instead of us, by what the poor have given them instead of buying, by the scarcity of people and the scarcity of money.

The third part opens with a description of the natural advantages which England possesses over her two chief rivals, France and Holland. Decker shows how the uniqueness of her position, the wealth of minerals she possesses, the fertility of her soil, the moderation of her government,

and the daring of her sailors combine to give her a position which no other nation can claim. He then proceeds to unfold his proposals. These are eleven in number and are fiscal, economic, and political. Of course one of them is the general repeal of import duties and another the abolition of bounties. To replace the revenue derived from the former of these he advocates a tax on the consumption of things which are not strict necessaries. The tax, as he develops it, partakes of the nature of an income tax with considerable exemptions, since indulgence in different luxuries is supposed to indicate the possession of a certain income. Thus the unambitious drinker of tea is to be taxed on an income of £25, the owner of two coaches and six on one of £8000.

Such are the contents of these two works, which, taken together, supply a body of practical economic doctrine, set off by illustration of fact, of such weight and importance that their author must rank as one of the most important of the precursors of Adam Smith.

[*Nat. Dict. Biog.* and auth. cited, especially ref. in *Gent. Mag.* The works have been very insufficiently treated of, though A. Smith refers to "the well-known proposal of" Decker in bk. v. c. 2, *W. of N.*] E. C. K. G.

DECLARATION OF PARIS. The name given to an important international agreement signed at Paris in 1856. During the maritime wars of the 17th and 18th centuries England had acted upon the rule that it was lawful to capture the goods of an enemy in the vessel of a neutral, while the goods of a neutral in the vessel of an enemy were not under ordinary circumstances good prize of war. During the same period it had been the traditional policy of France to confiscate neutral goods found in enemies' ships. Thus, when in 1854 England and France entered into an alliance against Russia, there seemed to be no escape for neutral commerce. The prospect caused much perturbation among merchants, and a considerable amount of pressure was brought to bear by neutral governments upon the allied powers. Accordingly in March 1854 Great Britain declared that "Her Majesty will waive for the present the right of seizing enemy's property laden on board a neutral vessel, unless it be contraband of war." France notified at the same time that she would not capture neutral goods found in an enemy's ship. And further, both states announced that they would not make use of privateers. At the close of the war the powers assembled in conference at Paris agreed upon a "Declaration concerning Maritime Law," which embodied and made permanent the concessions granted during the struggle, The Declaration was adopted on 16th April 1856, by Great Britain, France, Austria, Prussia, Russia, Sardinia, and Turkey ; and all maritime states except the United States, Bolivia, Uruguay, and Venezuela have since acceded to it. Its enacting clauses run as follows :

1. Privateering is and remains abolished.
2. The neutral flag covers enemy's goods with the exception of contraband of war.
3. Neutral goods, with the exception of contraband of war, are not liable to capture under an enemy's flag.
4. Blockades in order to be binding must be effective, that is to say, maintained by a force sufficient really to prevent access to the coast of the enemy.

It was further agreed that no signatory power should be at liberty in its dealings with non-signatory powers to enter into arrangements contrary to the foregoing articles.

The Declaration of Paris is one of the greatest triumphs won by commercial interests over the strict rules of maritime warfare. Its importance resides in its first three articles. Article 4 did no more than formulate a principle acknowledged for more than a century. Construed strictly it requires an impossibility ; for no blockade, however strict, can always "prevent access to the coast of the enemy." But it is clear that the words were meant to be understood in a reasonable sense as merely prohibitory of ineffective or "paper" blockades (Dana's note 233 to Wheaton's *International Law*). Article 1 struck at a most objectionable practice. The current of opinion had long been running strongly against the use of privateers. Nelson had declared that they were only one degree removed from pirates. The practice, in its former character, is not likely to be revived in civilised warfare. But the device of a volunteer navy bears some resemblance to ancient privateering. During the Franco-German War of 1870-71, the Prussian government invited private shipowners to fit out their vessels for attacks upon French men-of-war, and offered temporary commissions to the officers of such ships. The project was never carried into effect. France denounced it as a violation of the Declaration of Paris ; and publicists and lawyers have differed widely as to its admissibility. But it is generally agreed that the vessels of the Russian Volunteer Fleet employed during the Russo-Japanese War, which in time of peace enjoyed a public character, in as much as they were under the command of regular naval officers and their crews subjected to naval training and discipline, were entitled to be regarded as qualified cruisers. And the more recent methods of recruiting the regular navy from the mercantile marine employed by Great Britain, France, Germany, Italy, and the United States are quite legitimate. Until 1907, however, there was no authoritative rule governing the conditions for the enlistment of private vessels and their conversion into ships of war. By the Hague Convention VII. of that year it was provided that no vessel can acquire

the status of a public ship or the rights and duties appertaining thereto, unless she is placed under the direct authority and immediate control and responsibility of the power whose flag she flies; that the vessel must bear the external marks of a warship; that the commander must be in the service of the State and duly commissioned; that the crew must be subject to naval discipline; that the vessel must comply with the laws and customs of war; and that the conversion must be publicly notified. The place of conversion, however, was left undefined, and in the war of 1914 Germany claimed and exercised the right to convert her merchantmen on the high seas. Austria-Hungary, France, and Russia also insisted upon the right, but Great Britain protested to the United States, which declined to take action until the necessity arose. Belgium sided with Great Britain.

Article 2 of the Declaration has provoked an enormous amount of controversy. Together with Article 3 it amounted to a new departure in the law of maritime capture. Up to 1856 the great naval powers had been divided between the old principle that the liability of goods to capture should be determined by the character of their owner, and the more modern principle, introduced by the Dutch in the days when they were the great carriers of the world's merchandise, that the character of the ship in which the goods were laden should settle their fate. The plenipotentiaries assembled at Paris in 1856 combined the two principles and adopted that application of each which was most lenient to commerce. A great outcry was raised in this country because the government accepted the rule "Free ships, free goods" (see *Hansard*, vol. cxlii.). Many of our leading statesmen, among them Earl Derby, Earl Russell, and the Earl of Beaconsfield, expressed opinions hostile to this part of the Declaration; and a popular agitation against it was maintained with great vigour by Mr. David Urquhart, and later by Mr. Thomas Gibson Bowles, M.P. On the other hand it was supported by such high authorities as Lord Palmerston, the Earl of Clarendon, and Gladstone. The truth seems to be that, while Great Britain remains neutral, her commerce, and especially her carrying trade, is favourably affected by the Declaration, but, when engaged in a great maritime war, the enormous volume of her exports and imports offered, as we have seen, a most vulnerable mark for the attack of the swift cruisers and submarines of the enemy.

Prior to the war some British jurists favoured the adoption of the exemption of private property from capture at sea. This no doubt would be an ideal solution, but the experience of the war has proved that so long as war is regarded as legitimate, and so long as private property on land is in practice seized and even confiscated, no maritime power will consent to abandon a weapon so potent. Such a conclusion must be drawn from the conduct of all the maritime powers in the war of 1914. By successive measures, Articles 2 and 3 practically ceased to be observed. By including in the term contraband all commodities directly or indirectly useful to the enemy in the prosecution of the war, and by making destination to the enemy the test; by the doctrine of continuous voyage; by rationing neutral countries; by treating neutral goods of enemy origin as enemy goods; the provisions of Articles 2 and 3 were whittled down to the vanishing point. And by the practice of long-distance blockade, *e.g.* the British blockade of the German Baltic ports, the original purpose of Article 4 was disregarded.

[*Annual Register*, 1856.—Lawrence, *Principles of International Law*, 7th ed. by Winfield.—Pitt Cobbett, *Leading Cases on International Law*, 4th ed. by Bellot (1924).] T. J. L.; H. H. L. B.

DECLARATION OF WAR. To the end of the 16th century it was usual to notify by letters of defiance or by heralds. But from 1700 to 1870 there are only ten instances of a formal declaration. Subsequently a tendency to issue a formal declaration may be noticed. The Hague Convention III., 1907, provides that "hostilities must not commence without previous and explicit warning, in the form either of a declaration of war, giving reasons, or of an ultimatum with conditional declaration of war." This provision was generally observed in the War of 1914.

[Pitt-Cobbett's *Leading Cases on International Law*, 4th ed., 1924, by Bellot.] H. H. L. B.

DECLARED AND REAL VALUES. For the purpose of compiling the trade statistics periodically presented to parliament it is required of every importer or exporter of goods that an entry should be made at the custom-house of the port of arrival or departure, containing amongst other particulars those of quantity and value. These values are now termed "declared" in distinction from former values denoted as "computed real" and "official." The earlier form was the latter of these three, and so styled because there were "fixed official rates" founded on the ascertained prices which all known articles bore in the year 1694, with the addition of such new articles as sprang up afterwards at the prices they each bore in the first year of their introduction. This method was discarded from the "trade" accounts in 1854, but continued to be used in the "finance" accounts until 1870, when it was dropped altogether.

In 1854 the import values assumed a new aspect, and became known as "computed real." The average prices which had prevailed during each month were obtained from experts, and applied to the quantities returned by the customs officers as having been brought to account

during the past month. This system gave place in 1871 to one by which the importer was required on the first entry of his goods—which took place before they left the ship—to state the quantity, so far as that could be estimated by weight or measurement, and the value also of each parcel as it arrived. This is termed the "declared value," and is that shown in the monthly and annual statements issued from the board of trade and custom-house.

For the exports the "official" values were prepared in like manner up to 1870, but for other reasons merchants were at a much earlier period required to declare the value of their respective shipments, and thus the "declared value," obtained as in the year 1798, has continued up to the present time.

Since 1870 the published values rest solely upon the authority of the persons by whom the several entries are passed; subject to such control as can be exercised by the customs authorities from a close inspection of such imports as, being liable to duty, are weighed or measured, and a cursory examination of such as are free from any charge in the shape of duty. There is also the power which the clerks engaged in the compilation of statistics possess of calling upon the importers to prove the accuracy of their statements by the production of the invoices or other documents in their possession. For the exports of British goods the values are also obtained from the declarations of the shippers, rendered some few days after the vessels in which they are exported have sailed.

For the purpose of comparison between recent and earlier years it is necessary to bear in mind the reversal of previous rules as to the period when the appraisement took place. It used, for the imports, to be after the goods had been landed and been subjected generally to the test of the markets in which they were bought and sold. It is now, before they have been even seen by the owners or consignees. For the exports the valuation used to be prior to their being sent for shipment, and when the quantity that could be received on board was uncertain. Now the declaration is made after they are beyond the reach of inspection, but when the shipper is presumed to have full knowledge of their cost. Thus the values given for imports are now estimates made by those through whose hands they pass, of what they ought to be worth. Those for the exports should be the actual amounts for which they have been obtained. Formerly, that is since the abrogation of "official values," that for the imports was ascertained after many or most of them had been dealt with; for the exports at a time when the shipper to a great extent knew only the orders he had given, but not the extent to which they had been executed.

Another point which needs to be borne in mind in the institution of a comparison between imports and exports is, that the moment of valuation is that of arrival in the one case, and departure in the other. Thus the valuations for imports includes all the charges which they have incurred for transit from the place of production, that for the exports excludes everything accruing after they leave the place of shipment.

It is obvious that in both cases the accuracy of the valuation depends upon the extent to which the facts are known to the person by whom the customs entry is made, and the care he bestows upon the estimate or record which he makes; and in neither is there any reason why these should not be as close an approximation to the truth as was secured at any former time, or in the records of other countries. In the absence of any motive for wilful error it is not probable that they are intentionally misstated. The chief danger lies in the fact that the entry may be made upon insufficient information, and there is a tendency to adopt average prices without due regard to the fluctuations which are continually taking place. To procure absolute accuracy would entail such a minute inspection and calculation as would tend much to impede trade transactions and be the occasion of great expense. The chief security consists in the multitude of small entries which go to make up the large totals, and in the many agents, acting independently of each other, by whom the particulars are gathered. Thus individual errors may be supposed to correct each other. Confidence may be reposed in the results obtained, at least for comparison of one period with another, if not for the perfect accuracy of each especial year or month. Although compiled from different sources and varying methods, there should be no breach of continuity in the records of the "computed real" and the "declared" values, but no fair comparison can be made in either case between the present records and those formerly known as "official."

[For fuller information on this subject reference may be made to "Report of Inspector-General of Imports and Exports in 1854."—"Reports of Commissioners of Customs."—Bourne, S., "Official Trade and Navigation Statistics," in the *Stat. Society's Journal* for 1872, p. 196, and "Trade, Population, and Food," 1880.—Giffen, R., *Essays in Finance* (2nd series).—M'Culloch, J. R., *Commercial Dictionary*, articles "Imports and Exports," "Balance of Trade."—Newmarch, W., "Progress of Foreign Trade of United Kingdom, 1856-77," in *Stat. Society's Journal* for 1878, p. 187.—*Parliamentary Paper*, No. 405, 1881, "Trade with France from 1861 to 1879."—"R. Giffen's Reports upon changes in the prices of Imports and Exports," 1879, *et seq.*] S. B.

DECREASING RETURNS. See DIMINISHING RETURNS.

DECREE OF REGISTRATION (Scot.) A Scotch contract usually contains a clause of

consent to registration for preservation and execution; this may be followed by registration in the court books, and an extract of the deed from the court books is equivalent to an extracted judgment of the court, not *in foro*, but enabling summary execution to be obtained, unless an action of suspension be raised to challenge the validity of the deed registered. A. D.

DEDUCTIVE METHOD. By the deductive method is meant a method of reasoning which begins by investigating the principal forces determining a given class of phenomena, and the general laws in accordance with which these forces operate, and then goes on to trace the consequences which ensue from their action and interaction under specified conditions. It proceeds, therefore, from the more general to the less general. The conclusions reached may indeed possess a high degree of generality considered in their relation to actual concrete facts; but they are particular, relatively to the very wide generalisations which constitute the premisses.

Recourse is had to the deductive method in cases where the method of direct induction is rendered specially fallible by reason of the great complexity of the phenomena under investigation. There are, therefore, *prima facie* grounds for availing ourselves of its aid, if possible, in the social sciences; since, as Mill observes, "of all effects, none depend on so great a complication of causes as social phenomena" (*Logic*, bk. vi. ch. 7, § 1). If we can effect a mental isolation of the principal forces in operation, then the problems to be solved will be simplified, and it may be possible to deal separately with their different aspects. The deductive method must not, however, be identified with pure deduction. In its complete form it is found to consist of three steps. There is, first, the selection of premisses; secondly, the deduction of consequences; and thirdly, the verification of consequences by comparison with what is observed actually to occur. The final step has for its object not merely to test the accuracy of the deductive reasoning in itself, but also to determine the relevancy of the premisses to the actual phenomena upon which the reasoning is intended to throw light.

It is at once clear that if the deductive method is to be of practical utility in any science, it must start from a basis of observation. Thus in political economy its premisses must not be chosen arbitrarily, but must correspond broadly with the general characteristics actually displayed by men in their economic dealings with one another, and with the circumstances in which they are placed. The premisses are, therefore, partly psychological, and partly obtained by an investigation of the physical and social environment in which men's economic activities are exercised. It is not necessary, however, that the propositions assumed in regard to men's motives or their material and social surroundings should be true universally or without qualification. To attempt any exact correspondence with what has been called the "full empirical actuality" would be to sacrifice generality, and to involve ourselves afresh in those complexities of actual economic life from which it is the special object of the deductive method temporarily to escape. The requirements are, first, that the motives taken into account shall be exceptionally powerful in the economic sphere, and so far uniform in their operation that the kind of conduct deduced from them may correspond with what actually happens in the great majority of cases; and, secondly, that the circumstances under which the motives are supposed to operate shall be of a representative character, either as regards economic life in general, or, at any rate, as regards a special aspect of it over a given range.

It follows that the deductive method involves a process of abstraction. A condition of affairs is assumed in which the operation of "disturbing causes"—such as never fail to be present in actual experience—is eliminated. The extent of the abstraction admits of all degrees, and what are to be regarded as "disturbing causes" will vary in different instances. In the most abstract reasonings of economics, attention is limited to general principles which are entirely, or almost entirely, independent of social institutions and economic habits, as, for example, the law of diminishing utility—namely, that the additional satisfaction which a person derives from an additional increment of any commodity diminishes as the stock of the commodity already in his possession increases. In other cases account may be taken of quite special conditions, such as a monopoly conferred by government, or temporarily established by effective combination. The abstraction frequently takes the form of assuming a stationary condition of affairs, in which the natural progress of economic life, with its multiplicity of changes and infinitely complex interactions, is supposed to be in certain respects arrested, so that some particular agency may have free play to work out its own proper effects unimpeded and under known conditions. In order to express this assumption, deductive political economy is sometimes said to study society statically, whereas actual society is dynamic. The analogy implied in the use of these terms is suggestive; but it must not be pushed too far.

Attempts have sometimes been made definitively to enumerate the premisses of deductive political economy; and there are no doubt a few premisses—such as the law of diminishing utility, already referred to, and the hypothesis of free and effective competition—which occupy a central position in economic theory. Any

exhaustive enumeration is, however, impossible; since, in order to suit fresh cases, old premisses may at any time be modified and new ones introduced. And it is important not to lose sight of the fact that in having recourse to the deductive method the economist is not rigidly tied down and limited in his choice of assumptions. Even Cairnes, who formulates somewhat narrowly what he regards as the ultimate and fundamental principles of economic reasoning, also recognises subordinate causes influencing human conduct in the pursuit of wealth, which may at a later stage be incorporated amongst the premisses of the science.

When recourse is had to the deductive method, the application of conclusions to actual economic phenomena is of course dependent upon the realisation of the conditions assumed in the premisses. The conclusions, moreover, are almost always subject to the proviso that the causes specially under consideration shall be allowed to work out their effects undisturbed; and they must accordingly be regarded, not as positive predictions of what will be found to occur in every individual instance, but as statements of tendencies which are not unlikely to require a wide range of experience and the lapse of a considerable interval of time in order that their operation may be clearly manifested. For these reasons deductive political economy is said to be a hypothetical science; but this must not be considered to imply unreality or want of correspondence with the actual order of economic phenomena. For so long as the premisses are not chosen arbitrarily, but take account of the most uniform and powerful of the forces in operation, the conclusions reached will be of fundamental importance from the practical, no less than from the scientific, point of view. The description "hypothetical" should, therefore, not be applied to political economy with any disparaging implication. In the same sense in which it is applicable to political economy, it is also applicable to such sciences as mechanics and astronomy.

In order to avoid misunderstanding and error in the use of the deductive method, it is necessary that the assumptions which constitute the basis of the argument should be clearly enunciated; and, further, that the conclusions reached should not be applied to any given state of society without a special investigation of the relevancy of the assumptions to the actual condition of affairs. It has been already pointed out that deductive political economy obtains its ultimate premisses from observation. But it follows from what has just been said that this is not the only function fulfilled by observation in the employment of the deductive method. Observation also determines the limits within which given assumptions are approximately realised, and indicates the kind of allowance that should be made for the effects of "disturbing causes." It, moreover, shows in what directions premisses must be modified in order that they may be adapted to special economic conditions; and, finally, it serves to illustrate, test, and confirm the inferences that have been deductively obtained. In the process of verification, however, it is always necessary to bear in mind the special character of these inferences. In so far as they relate only to what will happen in the long run, time must be allowed for effects fairly to manifest themselves; and in any case it must be remembered that a general tendency cannot be either established or refuted by an individual instance.

In the application of the deductive method to economic problems many recent economists have availed themselves of the aid afforded by diagrams and mathematical symbols; and it may be observed in passing that when this is the case the precautions essential to the right use of the method are less likely to be overlooked. For the employment of mathematical methods necessitates a full analysis and clear statement of the premisses upon which the reasoning is based; and no one is likely to imagine that the results reached can be applied offhand to the solution of practical problems. (See DIAGRAMS; GRAPHICAL METHOD; MATHEMATICAL METHOD.)

The deductive method has been the traditional method of English economics, and the part which it plays in building up economic doctrines has been specially emphasised by Mill in his *Unsettled Questions of Political Economy* and in his *Logic*, and by Cairnes in his *Logical Method of Political Economy*. Upon this point Jevons also expresses his agreement with them. "I think," he says, "that John Stuart Mill is substantially correct in considering our science to be a case of what he calls the physical or concrete deductive method; he considers that we may start from some obvious psychological law as, for instance, that a greater gain is preferred to a smaller one, and we may then reason downwards, and predict the phenomena which will be produced in society by such a law. The causes in action in any community are, indeed, so complicated that we shall seldom be able to discover the undisturbed effects of any one law, but, so far as we can analyse the statistical phenomena observed, we obtain a verification of our reasoning. This view of the matter is almost identical with that adopted by the late Professor Cairnes" (*Theory of Political Economy*, 1879, p. 18).

In opposition to this view, writers belonging to the more advanced wing of the "historical school,"—for example, Knies and Schmoller in Germany, and Cliffe Leslie and Ingram in England,—either reject altogether the use of the deductive method in economics, or hold that the part which it has to play is unimportant and soon exhausted. Thus amongst the pre-

vailing errors of economists, Professor Ingram includes "that of exaggerating immensely the office of deduction in their investigations." "We can," he allows, "sometimes follow the method which Mill calls the *à priori* deductive, that is, we can, from what we know of the nature of man and the laws of the external world, see beforehand what social phenomena will result from their joint action; but though the economists of the so-called orthodox school recognise no other method, we cannot really proceed far in this way, which is available only in simple cases." Hence it is argued that "the *à priori* deductive method should be changed for the historical" (*Statistical Journal*, 1878, pp. 617-626). Similarly, Cliffe Leslie lays it down that "the abstract and *à priori* method yields no explanation of the laws determining either the nature, the amount, or the distribution of wealth." "On the other hand," he says, "the philosophical method must be historical, and must trace the connection between the economical and the other phases of national history" (*Essays*, 1888, p. 189).

It would occupy too much space to attempt here a discussion of the various arguments by which the assailants of the deductive method attempt to make good their position. It may, however, be observed that the problems which they have mainly in view are apt to be different from those which the deductive economists have mainly in view. They are, for example, not unfrequently thinking of historical or semi-historical problems, which no one would seriously maintain to be capable of a deductive solution,—as, for example, the changes in kind which wealth undergoes in different states of society. For further illustrations of this point reference may be made to Cliffe Leslie's essay *On the Philosophical Method of Political Economy*.

Critics of the deductive method are, moreover, apt to misinterpret the nature of the conclusions to which alone it professes to lead. "The deductive economist's theory of profits and prices," says Cliffe Leslie, "will be found to claim to be true, under all circumstances, in the case of every individual in trade and of every particular article, and to foretell the exact rates at which goods will be sold. His theory of taxation is an application of his theory of profits and prices; and it proceeds on the assumption that prices will actually conform to the cost of production, so nicely in every particular case, that every special tax on any commodity will be recovered by the producer from the consumer, with a profit on the advance" (*Essays*, p. 229). It is certain that no authoritative writer of the deductive school has ever intended to lay down such doctrines as these. The doctrine, for example, that taxes on commodities are, under ordinary conditions, paid by consumers, relates solely to what will happen in the long run, and writers like Mill and Cairnes have never for a moment imagined that every individual instance will afford a verification of it. Cairnes is very emphatic upon this point. Referring to the doctrine of cost of production, he says—"Is it meant that freely-produced commodities invariably and without exception exchange for one another in proportion to their respective costs of production? If this is what the doctrine means, the assertion is clearly untrue. In what sense, then, is the statement true, that cost of production regulates the value of freely-produced commodities? The answer is, it is true hypothetically—in the absence of disturbing causes; or, to express the same thing in a different form, the doctrine expresses not a matter of fact, but a tendency" (*Logical Method*, pp. 93-4).

Both friends and foes of the use of deduction in economic inquiries have too often implied that the use of one method excludes the use of other methods. But this is far from being the case. In political economy the inductive and deductive methods are of varying relative importance in different departments of inquiry. But in every department the value of either is increased in so far as it can be supplemented by the valid employment of the other. Increased accuracy and abundance of observations and improved opportunities for making valid inductions will never render deduction superfluous, but will, on the other hand, provide it with a broader and better established basis, extending the range of its applicability, leading to its further developments, and increasing the practical utility of its conclusions. The object of the present article is to explain the nature of the deductive method, and for a detailed consideration of other methods reference must be made to HISTORICAL METHOD, INDUCTIVE METHOD, etc. But whatever method may be immediately under consideration, it is most important to point out that the recognition of its utility does not imply the denial of the utility of other methods in their proper place and under proper conditions.

It will constantly be found that economists are less narrow in their actual method of setting about the solution of economic problems than they are in what they write about method. Mill, for example, while sometimes speaking of the inductive method as if it were altogether inefficacious in economics, himself gives a typical example of its use in the discussion of the economic aspects of peasant proprietorship, which occupies so prominent a place in his political economy. Cliffe Leslie, on the other hand, continually has recourse in his own economic reasonings to that deductive method which he elsewhere so vehemently attacks. Some striking instances of this will be found cited in an article on "Economic Method" by Professor Sidgwick in the *Fortnightly Review* for February 1879.

There are indications that in the future the controversy as to the place of the deductive method in political economy will be less prominent than it has been in the past. A compromise is being effected, and economists are coming to substantial agreement. Thus, writers who carry on the tradition of the so-called classical school fully recognise that induction as well as deduction has an important part to play in the building up of economic doctrines. Professor Marshall, for example, writes—"Induction and deduction go hand in hand. The progress of economic reasoning depends on the study of economic facts, and, on the other hand, that study itself requires to be guided and directed by the scientific knowledge which is the outcome and abstract of a previous study of facts. Every new study of facts adds to our knowledge of the action of economic causes, it enables us to form a better judgment as to the effects which any cause is likely to produce, whether acting singly or in combination with others; and it puts us in a better position to detect the hidden causes of results which come under our notice. But the study, to be serviceable, must be careful and thorough, and must be so arranged as to isolate the action first of one cause and then of another, and make a careful examination of each" (*Principles of Economics*, 1891, p. 88). On the other hand, economists whose natural sympathies tend in the direction of the historical school are emphatic in their statements that the deductive method is very far indeed from being superseded. "These, then," says Professor Wagner, "are the two methods: on the one hand, deduction from psychological motives — first and foremost, deduction from the motive of individual advantage, then from other motives; on the other hand, induction from history, from statistics, and from the less exact and less certain, yet indispensable, process of common observation and experience. With both methods we are to approach the various problems of political economy, and to solve them so far as we can. Which method is most to be used depends on the nature of the particular problems; but it depends also on the turn of mind, very likely on the accident of training and education, of the individual investigator" (*Quarterly Journal of Economics*, October 1886, p. 124). Professor Cohn, again, expresses very clearly the view that deduction and induction are to be regarded as supplementary, not as antagonistic, methods. "Our general consideration of the nature of induction," he remarks, "has taught us that this method by itself alone, without deduction, is blind. Any historical or statistical collection of facts can have a meaning, only when it is made from a point of view suitable to the subject which is to be considered. This material, collected from a definite point of view, can again only be made of use for the discovery of a causal connection by being brought under the light of a previously-prepared hypothesis. The hypothesis is tested by this new material with regard to its reliability, while in its turn it throws new light upon the material. Thus a tentative advance from the most uncertain suppositions to ever more firmly established assumptions, is brought about by progressive observations" (*System der Nationalökonomie*, vol. i. p. 33).

[On the subject of the present article, see also ANALYTICAL METHOD, A PRIORI REASONING, etc. Some discussion of the deductive method and of economic method in general will be found in most systematic works on political economy. Special reference may, however, be made to the following: Bagehot, *Economic Studies*, essays i. and ii.—Block, *Les Progrès de la Science Economique*, Introduction.—Böhm-Bawerk, "Historical *versus* Deductive Political Economy" (*Annals of the American Academy of Political and Social Science*, October 1890).—Cairnes, *Character and Logical Method of Political Economy*.—Cherbuliez, *Précis de la Science Economique*, Introduction.—Cohn, *System der Nationalökonomie*, Introduction.—Cossa, *Guide to the Study of Political Economy*.—Cunningham, *The Use and Abuse of Money*, ch. i.—Dunbar, "The Reaction in Political Economy" (*Quarterly Journal of Economics*, October 1886).—Ingram, *History of Political Economy*, and *Address as President of Section F of the British Association*, 1878.—Jevons, *Theory of Political Economy*, ch. i.—Keynes, *Scope and Method of Political Economy*.—Cliffe Leslie, *Essays in Political Economy*, especially essays xiv. to xvii.—Lunt, *Present Condition of Economic Science*.—Marshall, *Present Position of Economics*, and *Principles of Economics*, bk. i. ch. vi.—Menger, *Die Methode der Politischen Oekonomie*.—Mill, *Unsettled Questions of Political Economy*, essay v., and *Logic*, bk. vi. ch. ix.—Roscher, *Principles of Political Economy*, Introduction.—Sax, *Das Wesen und die Aufgaben der Nationalökonomie*.—Von Scheel, "Die Politische Oekonomie als Wissenschaft" (in Schönberg's *Handbuch der Politischen Oekonomie*).—Schmoller *Zur Litteraturgeschichte der Staats- und Sozialwissenschaften*.—*Science Economic Discussion* (essays by H. C. Adams, R. T. Ely, etc.)—Sidgwick, *Principles of Political Economy*, Introduction, ch. iii., and *Scope and Method of Economic Science*.—Senior, *Political Economy*.—Wagner, "Present State of Political Economy" (*Quarterly Journal of Economics*, October 1886).]

J. N. K.

DEED (Scot.) Any formal written instrument, properly authenticated, stating the terms of any agreement, contract, or obligation, which must be definite, possible, and lawful. It may be unilateral or bilateral, etc.; it may be gratuitous, for no consideration is necessary; and "sealing" is entirely in desuetude, though anciently necessary in matters above £100 Scots (£8 : 6 : 8), and only dispensed with by statute 1584 in the case of deeds which were also to be registered. A. D.

DEED OF ARRANGEMENT. A deed of arrangement (under the 50 & 51 Vict. c. 57) is an instrument in writing "made by, for, or in respect of, the affairs of a debtor for the benefit of his creditors generally (otherwise than in pursuance of the law for the time being in force relating to bankruptcy)."

The definition of a deed of arrangement given by the act is very wide. It includes (1) an assignment of property (to one or more trustees for realisation and distribution among creditors); (2) a deed or agreement for a composition; (3) and (where creditors obtain any control over a debtor's property or business, a deed of inspectorship or other instrument entered into for the purpose of carrying on or winding up a business; (4) a letter of license given by creditors authorising a debtor, or by a debtor authorising some one else, to manage or dispose of his business with a view to the payment of his debts. The essential feature of the deed in each case is that it must be for the benefit of the debtor's creditors generally, and of the act that such deeds must be registered and open to public inspection. The object of the act, therefore, is not to sanction deeds of arrangement which would otherwise be illegal, or to interfere with or control the administration under such deeds, but simply to secure due publicity. Prior to 1887 such deeds were simple agreements governed by common law and not by special statute. By the above-mentioned act, which came into operation on the 1st of January 1888, deeds of arrangement became subject to certain statutory conditions, the absence of which renders them absolutely void. The act does not otherwise affect their status, or give any validity to them which they would not otherwise possess. They are not required to be in any particular form, and remain voluntary agreements binding only on such persons as accede to them, and enforceable only in accordance with the provisions which they contain. In this respect they are essentially different from the deeds of arrangement and schemes of arrangement which have been legalised under former bankruptcy acts, and more particularly under the acts of 1849, 1861, and 1869. The latter enjoyed certain special privileges, and were binding upon all the creditors of a debtor when adopted by a certain majority in the manner prescribed by law. They also differ in the same manner from the "schemes of arrangement" under the Bankruptcy Acts of 1883 and 1890, which when assented to by a certain majority become binding on dissenting creditors, subject to approval by the court after an investigation into the debtor's conduct (see BANKRUPTCY).

The chief condition imposed upon the validity of deeds of arrangement by the act of 1887 is that they shall be stamped and registered in the bills of sale department of the central office of the supreme court if in England, or in the bills of sale office of the high court of justice if in Ireland, within seven clear days after their first execution either by the debtor or by any creditor. Registration is effected by filing with the registrar copies of the deed accompanied by affidavits verifying the same and containing an estimate of the amount of property and liabilities included thereunder, the total amount of composition (if any), and the names and addresses of the debtor and his creditors. The leading particulars of the deed are then entered in a register, and this register together with the deed itself is open to inspection by any person, whether he be a creditor or not, on payment of the prescribed fee of 2s. 6d. While all deeds are thus registered in the central office in London, separate registers are kept in the county court of the district in which the debtor's place of business or residence is situated, when such place of business or residence is outside the London bankruptcy district. In these cases the registrar at the central office transmits a copy of the deed to the registrar of the county court, who is required to file and to permit inspection of the same in the like manner and on the like terms as in the case of the central register.

The publicity secured by the act has undoubtedly been of great benefit to the trading community. Prior to its passing, an insolvent trader, if he could induce all his creditors to assent, was often in a position to effect a secret arrangement of his affairs, which left him for some months and even years full liberty to trade and incur fresh obligations while he was still under the burden of old ones which remained undischarged, and which were ultimately paid or compounded for out of the proceeds of assets subsequently acquired on credit. Such arrangements were often disastrous to the new creditors who, when their debtor finally passed into the bankruptcy court, had the mortification of finding that the goods which they had thus parted with to an apparently solvent trader had simply been used for the purpose of paying off old liabilities under a secret arrangement with the old creditors. This practice is now rendered more difficult owing to the necessity which the Deeds of Arrangement Act imposes of registering such deeds, and the facilities which it provides for inspection. The publicity thus given is readily utilised through the medium of trade societies for the benefit of the trading community.

An indirect benefit arises from the information afforded with respect to the condition of trade throughout the country, and the total amount of national losses by insolvency. Prior to 1888 no means existed for estimating the amount of these losses except in regard to cases administered under the Bankruptcy Act, although it was known by traders that

a considerable number of such arrangements annually took place, especially in certain trades such as the grocery, drapery, etc. The following statistics relating to the number and scope of the deeds of arrangement registered under the act of 1887 during three recent years are taken from the annual report of the inspector-general in bankruptcy for the year ending 1912.

Year.	Number of Cases.	Liabilities.	Assets.	Estimated Loss to Creditors.
		£	£	£
1900	3354	4,263,610	2,486,913	2,771,462
1907	3488	5,214,504	3,100,784	3,354,034
1912	2770	3,189,900	1,654,553	2,147,258

Though these figures are not so large as the corresponding figures under the Bankruptcy Act, they show the considerable extent and important character of the insolvency annually dealt with under this head.

A deed of arrangement is only binding upon the creditors who assent to it, and if it comprises an assignment of a debtor's property to a trustee for the benefit of his creditors generally, it is an act of bankruptcy. Any creditor who does not accede to it can therefore proceed against the debtor by ordinary process, and may, if he establishes a debt of upwards of £50, present a bankruptcy petition against him; and if an order of adjudication is made in pursuance of a petition presented within three months after the date of the deed, the latter may be set aside and become void at the instance of the trustee in the bankruptcy. Any person who has dealt with the estate included in the deed, whether as trustee or otherwise, thereupon becomes personally liable as a trespasser for any loss sustained by his intervention. After this period of three months the deed cannot be challenged under the Bankruptcy Act, although it is still liable to be set aside, under the statute of Elizabeth (13 Eliz. c. 5), if it can be established that it was entered into for the purpose of defrauding creditors. Although therefore no creditor is bound by the deed unless he assents to it, he practically loses his remedy as against the debtor's property, unless he can prove fraud, or unless he takes steps to preserve his rights by a bankruptcy petition within three months from the date of the deed; and although he can after that period make the debtor bankrupt, he is not likely to derive much satisfaction from that course, as the debtor will probably obtain his discharge subject to a period of suspension, while the creditor may lose any dividend which he might have received under the deed of arrangement.

There are several important differences betwixt a liquidation under a deed of arrangement, and one under the Bankruptcy Act. The following are the most important.

1. Under the Bankruptcy Act every debtor must undergo a public examination in court. Under a deed of arrangement no examination takes place, either in court or otherwise, except such as individual creditors choose privately to institute, and the debtor chooses to submit to, prior to the execution of the deed.

2. The release of the debtor from his obligations is subject under the Bankruptcy Act to certain statutory limitations, and to the approval of the court. Under a deed of arrangement the release is generally the main consideration received by the debtor for executing the deed, and is effected either by the instrument itself or in such method as the latter may prescribe. A release, however, is not necessarily an essential feature of the deed; in fact the deed is sometimes entered into merely for the purpose of giving the debtor time to pay his debts in full.

3. The trustee in bankruptcy can set aside various preferences given by the debtor within certain periods prior to the date of the bankruptcy petition which would not be capable of being impeached as fraudulent at common law. Under a deed of arrangement the trustee has no such power.

4. In bankruptcy, a trustee's accounts are subject to regular audit by the board of trade; under a deed of arrangement there is no audit except such as may be provided by the terms of the deed.

5. A trustee in bankruptcy is not only bound to file detailed copies of his accounts in court and with the board of trade, but to send a summary of his receipts and payments to every creditor. Under a deed of arrangement the trustee is under no obligation to send any account to creditors (unless specially provided for by the deed). By § 25 of the Bankruptcy Act of 1890, however, trustees under deeds are now required to send copies of their accounts annually to the board of trade, where they can be inspected by any creditor on payment of a fee of one shilling.

While it is obvious that deeds of arrangement thus lack many of the safeguards provided in the interests of the creditors and of the public in the case of bankruptcy proceedings, it is sometimes easier under them to carry on the business of a debtor who has become involved in temporary difficulties with a view to payment of a composition, than would be practicable under the latter. The result may thus be more beneficial both for the debtor and for his creditors.

(In the year 1890 the inspector-general in bankruptcy wrote in his report for that year:—"To give any majority of creditors the power to condone the offences which the Bankruptcy Act condemns and punishes would be to degrade commercial morality into a question of barter and to undo much of the benefit which the act has conferred upon honest and prudent trade. What

appears to be required, therefore, is to give any dissenting creditor the power to bring a deed of arrangement which affects his interest before the court, and to give the court the power when satisfied that it has been assented to by a certain majority of the creditors, that no offences under the bankruptcy law have been committed, and that no judicial investigation is necessary, to make the deed binding upon all the creditors. With a measure passed on these lines safeguarding on the one hand the interests which the bankruptcy law was designed to protect, and providing on the other against obstructive tactics on the part of an unreasonable minority, it might be fairly hoped that the controversy between the advocates of private arrangements on the one hand and bankruptcy on the other would be closed, and that the two systems might be regarded as forming together a complete code of bankruptcy procedure.") J. S.

The Bankruptcy Act 1913, which came into force April 1, 1914, has improved the law with regard to Deeds of Arrangement in so far as it more certainly ensures that the trustee is an honest man, and that the deed has the assent of the majority of creditors. It prohibits general assignments of book debts unless they are registered in the same way as Bills of Sale, and further makes failure to keep proper books after any deed of arrangement has been effected, in the event of subsequent bankruptcy, a punishable offence. Under a provision of this act the trustee has to give security for the due performance of his duties unless exonerated by a special resolution of the creditors passed for the purpose.

DEED POLL. A deed executed by one party only. It is so called because the top of the parchment was "polled" or shaved quite even instead of being "indented."

[Stephen's *Commentaries on the Laws of England*, bk. ii. pt. i. ch. xvi.] J. E. C. M.

DEFALCATION. The term defalcation is commonly used to describe the action of a clerk or servant who wrongfully appropriates to his own use money which he has received on account of his employer. A defalcation in this sense, although morally equivalent to theft, differs from theft in the circumstance that the money has never come into the possession of the person entitled to it, and so has not been taken out of his possession by the offender. Defalcation is, however, a popular rather than a legal term, and is often used with no very definite signification. The legal equivalent of defalcation, as above described, is EMBEZZLEMENT (*q.v.*) F. C. M.

DEFENCE. Name of a pleading in an action by which the defendant replies to the plaintiff's claim as set out on the indorsement on the writ or in the statement of claim. It must, like every other pleading, "contain only a statement in a summary form of the material facts" on which the defendant relies. If it has been settled by counsel it must be signed by him, and if it contains more than 720 words it must be printed. The defence may consist (1) in a denial of the facts alleged by the plaintiff; (2) in a denial of the legal conclusions drawn by the plaintiff from the facts stated by him; (3) in an admission of the facts stated by the plaintiff coupled with an allegation of other facts which take away the plaintiff's right (*e.g.* a contract is admitted, but it is alleged that it was obtained by fraud, or that it has been performed before action brought, or that the plaintiff has released his right). Allegations of fact in the statement of claim, if not denied specifically, or stated to be not admitted, are taken to be admitted by the defendant (except in the case of an infant or lunatic defendant).

E. S.

DEFENCE, COST OF. The feudal system distributed property and influence in proportion to the obligation to take part in defence. Its armies were essentially militias. The growth of monarchy, with the tendency to identify the state with the personal ruler, threw the cost of defence mainly on the revenues of the sovereign, obtained by taxes in lieu of the feudal dues. War came to be regarded as the personal affair of the king, and the efforts made in war were limited by the size of the standing army which he was able to maintain. In this period the art of war became a distinct profession or trade, and the superiority of a standing army over a militia was soon recognised, nowhere more clearly than in the *Wealth of Nations*, where the two were well distinguished. "The practice of military exercises," wrote Adam Smith, "is the sole or principal occupation of the soldiers of a standing army, and the maintenance or pay which the state affords them is the principal and ordinary fund of their subsistence. The practice of military exercises is only the occasional occupation of the soldiers of a militia, and they derive the principal and ordinary fund of their subsistence from some other occupation." Adam Smith, however, clearly perceived that "a militia which has served for several successive campaigns in the field becomes in every respect a standing army." The French revolution identifying the nation with the sovereign, brought the whole nation into arms. The force thus developed, though at first a mere militia, fulfilled Adam Smith's prediction and easily crushed the comparatively small armies maintained by the neighbouring monarchies, and compelled them, too, to recognise that defence is the business not merely of the sovereign but of the nation. This view has been revived by more recent events, and at the present day defence is conducted as far as possible by the employment of the whole of the national resources.

The loss of productive energy and of capital caused by war far exceeds the pecuniary expenditure of the belligerents. It includes also

material destruction on a great scale, the interruption of trade, the cessation of industry, the loss by death, or disablement from wounds or disease, of a great number of workers. The economic losses are usually great in proportion to the duration of the war; they are also as a rule greater on the defeated side. Accordingly, in order to avoid defeat, to shorten the duration of a possible war, and to render attack improbable except for grave motives, preparations are made during peace, which are amongst the principal objects of government expenditure.

The modern continental system combines the advantage of a militia—the soldier's sustenance not being a lifelong burden to the state—with that of a standing army, which consists in superior professional skill. The leaders and instructors (officers) and their assistants (non-commissioned officers) are professional soldiers, at all times paid and maintained by the state. The rank and file are ordinary citizens, compelled to devote to the exclusive practice of military exercises the minimum time within which skill in arms and perfect discipline can be acquired. This period varies in the continental practice between two and three years, with an exception in some cases in favour of well-educated recruits, who serve one year only. The object is to make a capable soldier of every healthy adult male. But no state has yet been willing to incur the expense of training the whole of the men born in any one year—the "annual contingent"—for the full period. Complete or partial exemption is therefore granted, usually to those whose productive services have a special value. The performance of military service is held to rest on a primary obligation and not on contract, so that the trifling money allowance made to the private soldier is not properly described as pay. This organisation produces for defence an army comprising the majority of able-bodied men between the ages of twenty and forty, but it maintains in time of peace only a fraction of this great number at the public cost.

In Great Britain the obligation to military service is in abeyance, and a standing army of a modified 18th-century type is maintained side by side with an old militia—the Special Reserve—and a new militia—the Territorial Force. The standing army is recruited by voluntary enlistment on the basis of contract for pay. The contract is for twelve years, of which, since recent changes in the system, nine are usually spent with the colours; during the remainder pay is received in return for the liability to be recalled upon mobilisation. The Special Reserve and Territorial Force are also voluntarily recruited; officers and men receive pay for each day served. In both alike the instructors (adjutants) and their assistants (non-commissioned officers), assigned to them from the regular army, receive continuously the full pay of their respective ranks, with extra allowances.

The relatively great cost of the English peace force arises partly from the endeavour to attract recruits by the offer of pay—a shilling a day—from a more expensive scale of clothing, feeding, and living, and from the fact that in England wages and salaries are on an average higher than in Germany. Moreover, the British army keeps garrisons in the West Indies, in the Mediterranean, South Africa, Ceylon, the Straits Settlements, and China. These garrisons absorb about 45,000 men, costing nearly four millions, while the receipts from the colonies and Egypt amount to only £552,500. Then a whole army corps is kept in Ireland. The frequent movement of troops thus necessitated causes some expense. In Germany the doctrine of duty applied to defence enables the scale of living and clothing to be kept down to what is necessary. The private soldier practically receives no pay, his 4½d. a day being hardly enough to provide food necessary in addition to what is supplied by the government. The pension list is relieved by the practice of employing discharged non-commissioned officers in the civil services, notably in the state railways and the post and telegraph offices.

A peace army withdrawing from productive labour five or six hundred thousand men, involves, of course, a larger loss of productive energy than one which keeps unproductive only a hundred and seventy thousand men. But it may be doubted whether the continental system involves any other economic loss different in kind from that which accompanies the British standing army. The soldier with the colours is, while his service lasts, withdrawn from production. The economical loss under this head depends on the number so withdrawn. If the number is small a selection can be made of those who would be inefficent producers. If it becomes considerable more efficient producers must in any case be taken, whether the enlistment is voluntary or the service a duty. The soldier is not merely a non-producer, but a consumer. It is evident from the figures that he consumes in proportion to numbers much more largely in England than in France or Germany. In Germany, at least, he is to some extent utilised as a producer, clothes and shoes being in many cases made by the soldiers, and thus the demand on the taxpayer reduced. That the soldiers so employed as workmen are not paid for their work is perhaps an injustice, but hardly a loss to the nation. On the other hand it is necessary to give due weight to the fact that the continental system, taking recruits at the age of twenty and dismissing them at twenty-two or twenty-three, withdraws them from industry before their services have become very valuable, and returns them to it with their industrial capacity unimpaired. It is widely

believed that the British soldier, on passing into the reserve after seven years of military life, has lost much of his industrial value. But the evidence given to Lord Wantage's Committee showed that in 1891 the majority of the reservists were in regular employment.

The German one-year "volunteers" serve at their own expense, thereby escaping the rest of the two years' term normal for other recruits. They are required to give proof of superior education. They correspond in attainments and amount of personal expenditure with British volunteer officers.

The aggregate annual expenditure of the European States upon armies and navies in time of peace exceeds at the present time £300,000,000, of which a larger proportion than at any previous period is devoted to naval forces. The expenditure of the principal European Powers is approximately as follows :—

(Foreign coins converted as £1=20 Marks, 25 Francs and Lire, 24 Crowns, 10 Roubles.)

Great Britain (1912-13) exclusive of India—		
Navy	£44,365,000	
Army	28,071,000	
		£72,436,000
India (1910-11) military services including marine		19,706,500
Austria Hungary (1909)—		
Army, including extraordinary expenditure	£16,995,506	
Navy	2,643,244	
		19,638,750
France (1910)—		
Army	£32,913,905	
Navy	13,659,826	
		46,573,731
German Empire (estimates 1910-11)—		
Army	£35,492,350	
Navy	7,902,600	
		43,394,950
Italy (estimates 1909-10)—		
Army ordinary and extraordinary	£12,349,046	
Navy ordinary and extraordinary	6,785,441	
		19,134,487
Russia (estimates 1910)—		
Army	£48,071,639	
Navy	8,924,743	
		56,996,382
Switzerland (estimates 1910)—		
Military expenditure		1,619,953

The following tables give an account of the forces maintained for the above expenditure :—

Navies (from Dilke return, 1910), ships built and building.

	Great Britain.	France.	Russia.	Germany.	Italy.	U.S.	Japan.
Battleships	65	23	15	41	12	34	17
Armoured coast defence vessels	..	8	2	7	..	10	..
Armoured cruisers	41	22	6	12	10	15	13
Protected cruisers 1st Cl.	18	5	7	..	..	3	2
" " 2nd "	44	9	2	28	3	16	14
" " 3rd "	16	8	2	12	11	2	6
Unprotected cruisers	2	..	..	10	..	5	6
Scouts	8	..	..	..	..	8	..
Torpedo vessels	23	10	6	1	5	2	2
Torpedo boat destroyers	187	77	97	98	23	40	59
Torpedo boats	116	246	63	82	96	30	69
Submarines	74	79	33	}+?	7	28	12

[Germany had in 1910 eight submarines built; the number building was not known.]

Armies (approximate figures).

	Peace Strength.	Mobilised Army.	Further Reserves.
Great Britain (Jan. 1, 1910)	165,686	299,676	350,758
France (1909)	523,000	1,220,000	1,200,000
Russia	1,200,000	1,700,000	?
Germany (1909)	621,162	1,760,000	1,500,000
Austria Hungary (1909)	382,808	674,000	?
Italy (1909)	288,349	600,000	?

The expenditure of the United Kingdom for defence according to the estimates for 1910-11 was :—

Navy—		
Personnel (numbers borne, 131,000)		£10,763,600
Matériel and administration		27,077,700
Non-effective		2,762,400
Amounts borne in other than navy estimates		373,358
Total naval expenditure (of which contributed by India and Colonies, £494,900).		£40,977,258
Army—		
I. Personnel. Regular troops—		
(*a*) 173,060 regular army	£16,496,658	
(*b*) 133,990 reserve	1,366,350	
(*c*) Labour and educational establishments	936,737	
Total regular army	£18,799,745	
Special Reserves and Territorial Force—		
(*a*) 75,013 special reserve, formerly militia	£1,938,332	
(*b*) 274,712 territorial force, formerly volunteers and yeomanry	3,257,803	
(*c*) 3010 Channel Islands militia	28,332	
(*d*) 2862 Malta and Bermuda militia and volunteers	32,738	
	£5,247,205	
Total Personnel (662,647)		£24,046,950
II. Stores and supplies		3,953,089
III. Staff and administration		1,106,061
Total army estimates (towards which India, certain colonies, and Egypt contribute together £1,184,100).		£29,106,100

The cost of maintaining armies and navies during peace should be compared with the cost of war. The following table (after Mr. Edgar Crammond in *Quarterly Review*, Oct. 1910) shows approximately the outlay incurred in the principal wars of recent times :—

Date.	War.	Cost.
		£
1853-1854	Crimean	340,000,000
1859	Italian	60,000,000
1864	Schleswig-Holstein	7,000,000
1861-1865	American Civil War—	
	Northern States	940,000,000
	Southern States	460,000,000
1866	Prussia, Italy, and Austria	66,000,000
1870-1871	Franco-German War—	
	French expenditure	540,000,000
	German "	77,500,000
1899-1902	South African War—	
	British expenditure	211,000,000
1904-1905	Russo-Japanese War—	
	Russian expenditure	300,000,000
	Japanese "	203,000,000

The place of "the expense of defence" in national economy was well considered by Adam Smith, who accounted for its progressive increase. In recent times this outlay has often been regarded as analogous to the premiums paid for insurance. But while an insurance company undertakes, in the contingency contemplated by the policy, to pay a sum by way of compensation, there is no similar means of repairing the damage done to a nation in war. The money spent during peace on armies and navies might better be compared to the outlay of a municipal corporation for the maintenance of a fire brigade, the purpose being not to compensate for loss but to prevent it. The protection, however, in the case of expenditure on armaments is not against war, but against defeat and its consequences.

The most important question concerning the cost of defence is, Wherein consists true economy? in other words, Which portion of the outlay brings in the largest relative return, what are the essential matters on which money must be spent during peace, and what preparations admit of postponement until the moment has arrived for the employment of force?

The table of the cost of recent wars shows that the expenditure in actual war is less in the case of a well-prepared than in that of an unprepared State. In the American civil war both sides were unprepared. For the South African war Great Britain was not prepared. For the Franco-German war, Germany was and France was not suitably prepared.

The elements of preparation for war are, first, the planning and directing organism, which consists of the organs of command and of administration; secondly, the training organism or cadres of the army; thirdly, the personnel of the rank and file; and, lastly, the matériel or the implements of war. Of these the first, the organ of forethought, costs proportionally little, but is the determining factor of the efficacy of the whole outlay. Thus the beginning of economy is to have first-rate ministries for Army and Navy, and within them the best obtainable personnel and organisation in the offices that deal with strategical and tactical problems. Next in importance for ultimate success is the quality, produced by training and selection, of the cadres, the officers and non-commissioned officers who educate the private soldiers, sailors and marines. The discipline and technical skill of the men are proportionate to the quality of the cadres. They increase with the time which the men spend in active training until the maximum of condition has been reached, after which successive increments of time fail to produce corresponding increments of discipline or skill. The matériel is of much the same quality in all modern armies and navies, and its cost proportionate to the size of the army or navy, the only economy being that produced by good judgment in the purchase or manufacture, *i.e.* by the quality of the ministry which buys or produces. From the consideration of these factors it appears that for an army or navy of a given size the cost will be lowest when the ministry and the cadres are the best in quality, and when the time during which the common soldier or sailor remains in training is not prolonged beyond the moment when further practice produces no corresponding addition to quality. In the case of an army this period is perhaps two to three years. In the case of navies it is probably longer, but the accessible evidence does not enable the time to be fixed.

From the point of view of Great Britain there is a further question as to the most economic method. It concerns the relative amount of effort to be given to naval and to military preparation respectively. For Great Britain beyond doubt the vital matter is to obtain victory at sea, which is the function of naval force alone. But experience shows that naval victory may be facilitated and that its effects are enhanced by the co-operation of military with naval force. Given a navy of such quality and size as to have the probability of decisive victory over the hostile navy, then the chance of dictating peace on satisfactory terms will be increased more by an efficient mobile army able to operate in the enemy's territory than by further naval force.

[See Giffen, "Cost of Franco-German War," *Essays on Finance*,—Bastable, *Public Finance*, bk. i. ch. ii. on "The Cost of Defence."] S. W.

DEFERRED PAYMENTS. The phrase "standard for deferred payments" is applied by Prof. Walker to the function of money which Jevons describes in the following passage and its context: "Every person making a contract by which he will receive something at a future day, will prefer to secure the receipt of a commodity likely to be as valuable then as now. This commodity will usually be the current money, and it will thus come to perform the function of a *Standard of Value*" (Walker, *Money*, p. 10; Jevons, *Money*, p. 14).

The term "deferred payments," when used in connection with "tabular standard" (or similar phrases), as by Prof. Walker in his *Money*, p. 159, refers specially to those "long-enduring debts and transactions," those "contracts extending over long series of years," which Jevons and others have proposed to regulate by a standard more permanent than money.

[Jevons's *Money*, p. 325; *Currency and Finance*, pp. 122, 297 (see INDEX NUMBER, TABULAR STANDARD).] F. Y. E.

DEFERRED STOCK. On the stock exchange the securities which have been issued by a government or corporation take different ranks. Thus an English railway company is

liable first for the interest on its debenture stock; next, for that on preferred stock, if earned; next, for dividend on the ordinary stock, and finally for dividend on deferred stock should any exist. In America the shares of railways usually represent the "deferred" interest of the original constructors in the profits of the railway; mortgage bonds, and perhaps preference interest, having first to be satisfied out of net profits. Most of the American railroad shares known to the London stock exchange represent nothing more solid than hope deferred for a very long time, but these are not known as what they really are, viz. deferred shares. Of late years it has been largely the practice of trust companies to issue preferred and deferred stocks, the former being entitled to a given rate of interest preferentially, while the deferred section of the capital takes the residuary profit in the shape of a dividend. Deferred stock is usually created to meet the demand of speculators who favour a security which is exposed to violent fluctuations. If an English railway, which has issued deferred stock, be responsible for a serious accident, the holders of deferred stock, who previously had a chance of a dividend, may see the prospect of dividend entirely blotted out for a time. The deferred stock of an English railway company is peculiar. It is the result of an option given to the holders of ordinary stock. For example, holders of London, Brighton, and South-Coast Railway ordinary stock have been allowed to divide each £200 of ordinary capital into £100 of B or preferred stock bearing 6 per cent, if such a dividend be earned, and £100 of A or deferred stock, which receives the surplus. Thus, when a dividend of 7 per cent is announced on Brighton Railway ordinary stock, a holder of £200 stock gets £14; but, if he has divided his stock, he gets £6 on £100 preferred capital and the surplus £8 on £100 deferred capital. There are investors who buy only the deferred stock, regarding themselves as residuary legatees of a fine estate; others avoid such a stock as being too speculative. The division was made to meet different tastes and suit different temperaments and deferred railway stock is simply the result of that division. A. E.

DEFICIENCY ADVANCES. Under sect. 12 of the Exchequer and Audit Departments' Act, 1866, the treasury are required at the close of each quarter to prepare an account of the income and charge of the consolidated fund, including under the latter head the charges for the public debt due on the fifth day of the succeeding quarter. This account is examined by the comptroller and auditor-general, who must, if the income of the consolidated fund in Great Britain or in Ireland for the quarter is insufficient to defray the charge upon it, certify the amount of the deficiency to the Bank of England or to the Bank of Ireland as the case may be, and those Banks are authorised to make advances during the succeeding quarter, on the application of the treasury, to an amount not exceeding in the aggregate the amount of the deficiency so certified. These advances are secured on an I.O.U. of the government, and are paid off out of accruing revenue as the state of the exchequer balance admits. They bear interest at a rate agreed upon, for each occasion, between the chancellor of the exchequer and the Bank, principal and interest being payable within the quarter in which the advance is made. The formal correspondence between the chancellor and the Bank respecting these advances is annually presented to parliament. [See *e.g.* Parl. Paper, No. 48 of 1910.]

Under sect. 5 of the National Debt (Sinking Fund) Act of 1875, the surplus of income above expenditure in any year (called the old Sinking Fund) may be applied by the National Debt Commissioners in paying off deficiency advances. (See also DEFICIENCY BILLS.) G. H. H.

DEFICIENCY BILLS. A term used to denote the exchequer bills formerly issued for the special purpose of being given to the Banks of England and Ireland as security for the advances required to make good the deficiency on the consolidated fund. The issue of these bills was regulated by the Act 57 Geo. III. c. 48, sects. 6-14, which provided that if upon making up the accounts of the income and charge of the consolidated fund for each quarter, it appeared to the treasury that the produce of that fund was not sufficient to defray the charges thereon, it should be lawful for the treasury to direct that exchequer bills should be made out for such sum or sums as should be sufficient to make up the deficiency. The interest to be borne by the bills was not to exceed the rate of "three pence halfpenny per centum per diem"; the Banks of England and Ireland were empowered to advance moneys on the credit of them; and they were to be placed as so much cash in the offices of the tellers of the exchequer. The Act above referred to was repealed by the Exchequer and Audit Departments Act, 1866, which substituted for them a similar but simpler institution known as DEFICIENCY ADVANCES (*q.v.*) T. H. E.

DEFICIT. In public finance, an excess of expenditure over income, either (*a*) actual or (*b*) estimated. Unless, of course, the occurrence of a deficit is deliberately contemplated—and the practice of making provision annually for the requirements of the coming year is opposed to such a course—an actual deficit is ordinarily due either to the failure of taxation to realise as much as was anticipated, or to the necessity for meeting extraordinary and unexpected expenditure, as in the case of war and warlike preparations. Where a deficit is only estimated, it can be, and frequently is, made good by an increase of taxation, unless an addition to the

public debt is deliberately sanctioned, or some fund or available asset is appropriated to meet the deficiency. Both descriptions of deficit are usually referred to in the budget speech of the chancellor of the exchequer, and it is essential to discriminate between the two in considering the finance of an administration.

The following table shows the estimated and actual deficits shown in regard to the finance of the United Kingdom since 1842-43.

Year.	Chancellor of the Exchequer.	Deficits.		
		Unrevised Estimate.	Revised Estimate.	Actual.
		£	£	£
1842-43	Goulburn	2,469,000	..	2,421,776
1847-48	Wood	..	..	3,092,285
1848-49	,,	..	2,031,256	269,378
1852-53	Disraeli	2,125,000	..	..
1854-55	Gladstone	2,840,000	3,543,000	6,196,808
1855-56	Lewis	16,560,519	18,895,000	22,723,854
1856-57	,,	13,961,000	9,373,000	3,254,605
1857-58	,,	..	..	247,346
1858-59	Disraeli	3,990,000	..	..
1859-60	Gladstone	4,867,000	..	..
1860-61	,,	9,400,000	1,286,000	2,558,385
1861-62	,,	..	..	2,412,006
1867-68	Disraeli	..	955,000	1,636,024
1868-69	Hunt	2,078,000	278,000	2,380,824
1870-71	Lowe	..	1,852,000	..
1871-72	,,	2,713,000	..	7,000
1876-77	Northcote	774,000	..	..
1877-78	,,	..	..	2,640,197
1878-79	,,	4,559,676	1,155,676	2,291,817
1879-80	,,	2,945,000	..	2,840,698
1882-83	Gladstone	..	200,000	..
1884-85	Childers	..	1,043,000	1,049,772
1885-86	,,	14,932,000	2,832,000	2,642,543
1886-87	Harcourt	543,599	..	..
1889-90	Goschen	1,917,000	..	..
1893-94	Harcourt	1,574,000	..	169,000
1894-95	,,	4,502,000	..	..
1895-96	,,	319,000	..	..
1899-1900	Hicks Beach	2,640,000	..	13,883,000 [1]
1900-1901	,,	38,814,000	22,541,000	53,207,000 [1]
1901-2	,,	55,347,000	48,876,000	52,524,000 [1]
1902-3	,,	26,824,000	24,174,000	32,932,000 [1]
1903-4	Ritchie	..	..	5,415,000
1904-5	A. Chamberlain	3,320,000	..	..
1908-9	Lloyd-George	..	..	714,000
1909-10	,,	15,762,000	..	26,248,000 [2]

1 South African war period.
2 Budget of the year not passed until following year.
[For earlier years see Northcote, *Twenty Years of Financial Policy*, 1862; Buxton, *Finance and Politics*, 1888. See also BUDGET.] T. H. E.

DEFINITIONS. Whately, in his ninth "Introductory Lecture on Political Economy" (published 1832), observes that in a science in which terms already in common use are employed there is greater danger of neglecting questions of definition than in a case where the technical terms are quite new to the student, and, therefore, obviously demand explanation. The need of any general maxims regarding the definition of economic terms does not seem to have been felt till after the appearance of Ricardo's chief work. Adam Smith, who gave few cut-and-dried definitions, had generally used words in the sense which they bore in ordinary language and had endeavoured to explain and illustrate this sense. But Ricardo, sometimes disregarded common usage altogether, and attributed entirely new significations to economic terms. For instance, he defined the rise and fall of wages, rent, and profit in such a way that wages and rent might "fall" when they had "increased one-half" and "three-fourths" (*Principles*, ch. i. § 7, in Works, p. 31). Such latitude was sure to offend. Malthus's conservative mind revolted against it, and in his *Principles* (1820) he protested that economists were not at liberty to define their terms just as they pleased (p. 26). In 1827 he laid down in his *Definitions in Political Economy* some "rules which ought to guide political economists in the definition and use of their terms." The object to be kept in view, he says, is such a definition and application of economic terms "as will enable us most clearly and conveniently to explain the nature and causes of the wealth of nations" (p. 4). This object will be best attained, he thinks, by using terms, whenever it is possible, in the sense in which they are used in the common conversation of educated persons. When it is necessary to make distinctions which are not made in common conversation, the previous practice of economists, and especially of Adam Smith, should be followed, and further changes only admitted when it can be clearly proved that they would decidedly contribute to the advancement of the science (p. 5). Cairnes, in his lecture "Of the place and purpose of Definition in Political Economy" (Lect. VI. in *Logical Method of Pol. Econ.*, 1857), repeats these rules in substance, but, less conservative than Malthus, insists strongly on the necessity of gradually improving the definitions of economic terms as knowledge of the science increases. In a frequently-quoted part of his lecture he develops a proposition laid down by Malthus (in *Principles*, p. 25) to the effect that economic distinctions may properly resemble the distinction between animal and vegetable in being founded on differences of degree. Sidgwick (*Pol. Econ.*, I. ii. § 1) observes that the two questions what is commonly meant by a term and what meaning can most conveniently be given to it must not be confused He also urges powerfully that the process of searching for a definition is extremely useful altogether apart from the discovery of a satisfactory one.

It must not be forgotten that the practical usefulness of political economy depends chiefly on its wide diffusion, so that the formation of an economic language understood only by specialists is highly undesirable. For the promotion of the material welfare of a people few things can be more useful than patient inquiry into the actual meaning of terms like wealth, income, capital, rent, wages, profits, when used in common language by ordinary people. As soon as ambiguities and inconsist-

encies are commonly perceived, language may be trusted to find some way of ridding itself of them without the assistance of formal definitions.

Great confusion has often resulted from the practice of defining mere words and neglecting the phrases or terms of which the words constantly form a part. For instance, many definitions of "wealth" are far from deciding what is meant by "the wealth of a nation" or "the wealth of an individual." E. C.

DEFOE, DANIEL (1660 or 1661-1731), was the son of James Foe, a retired London tradesman and a nonconformist. At the age of fourteen, Daniel was sent to a school at Newington Green, kept by Mr. Morton, an ejected nonconforming minister. Having completed his education, he went into business. Keenly interested in politics, he took up arms during Monmouth's rebellion in 1685, and joined the Prince of Orange's army in 1688.

In consequence, perhaps, of not giving all his mind to business, he failed in 1692 for £17,000. He compounded with his creditors, but subsequently paid them in full. He had already made one or two essays in literature, and about this time composed his essay upon *Projects*, which displays his practical and inventive turn, recommending the establishment of a national bank, savings banks, friendly societies, an amendment of the law of bankruptcy, and improvements in education. His first hit as a political writer was with a doggerel poem, the *True-born Englishman*, published in 1701, which ridiculed the exclusive national pride of Englishmen, and their grudge against the Dutch. It gained for Defoe the favourable notice of William III. Thenceforward he found constant employment as a journalist. In 1702 his ironical pamphlet, *The Shortest Way with the Dissenters*, led to his conviction for libel. Released from prison in 1704, he wrote first for Harley, then for Godolphin, and for Harley again on his return to power. But Defoe was again committed to prison in 1713, on account of certain writings directed against the Jacobites. Soon afterwards he received a pardon, and although convicted in 1715 for a libel on Lord Annesley, he was not sentenced, but was again taken into the service of the government. Somewhat later he produced a series of works of special economic interest, *The Tour through Great Britain*, published 1724-26; *The Complete English Tradesman*, published 1725-27; and the *Plan of English Commerce*, published 1728. He had combined literature with business, and was fairly prosperous in his later years. But he seems to have met with misfortune, now not clearly ascertainable, before his death in 1731. He married at least once, and left two sons and four daughters.

Defoe was one of the most versatile and voluminous of English writers. Exclusive of his contributions to journals, 254 distinct works are ascribed to him by his biographer Mr. Lee, who rejects as spurious many others which have been ascribed to Defoe. Some of those enumerated, however, appear to be reprints. Journalist, pamphleteer, verse-maker, novelist, and moralist, he ranged freely over the varied interests of practical life. By virtue of his lively interest in concrete things, his varied information, and his vigorous style, he is an important authority for economic history, especially for the condition of the industrial and commercial classes in the first part of the 18th century. In no sense a scientific writer, he has made no contribution to economic theory. But his inventive genius occasionally suggested improvements in the economic mechanism of the nation, and his lively imagination sometimes placed economic truths in a singularly vivid light. As an instance, we may take from *Robinson Crusoe*—incomparably the ablest of his novels—Robinson Crusoe's reflections on the inutility of the gold and silver which he found on the wreck of the Spanish ship and in the wreck of his own ship, and which to him was not wealth at all. "I smiled to myself at the sight of this money: 'O drug!' said I aloud, 'what art thou good for? Thou art not worth to me, no, not the taking off the ground: one of those knives is worth all this heap: I have no manner of use for thee.'"

[The life of Defoe has been written by Wilson (publ. 1830), by Chadwick (publ. 1859), by Lee (publ. 1869).—See also Professor Minto's Life in *English Men of Letters*, and Sir Leslie Stephen's Life in the *Dictionary of National Biography*.]

For a complete list of Defoe's writings so far as ascertained, see Lee's *Life*. Those which possess an economic interest are as follows: *An Essay upon Projects*, 1697 (not in fact published until March 1698), 2nd edition 1702.—*The Villainy of Stock-jobbers Detected and the Causes of the late Run upon the Bank and Bankers Discovered and Considered*, 1701.—*Giving Alms no Charity, and Employing the Poor a Grievance to the Nation* (a criticism of Sir Humphrey Mackworth's Bill for establishing in every parish a manufactory for the employment of the poor), 1704.—*Remarks on the Bill to prevent Frauds committed by Bankrupts*, 1706.—*An Essay upon Public Credit*, and *An Essay upon Loans*, 1710.—*An Essay on the South Sea Trade*, 1711.—*An Essay on the Treaty of Commerce with France*, 1713.—*Mercator, or Commerce Revived* (a paper published thrice a week, advocating the commercial policy of Harley and St. John), of which the first number appeared 26th May 1713 and the last 20th July 1714.—*Considerations upon the Eighth and Ninth Articles of the Treaty of Commerce and Navigation*;—*Some Thoughts upon the Subject of Commerce with France*; and *A General History of Trade*, all published in 1713.—*Anatomy of Exchange Alley*, 1719.—*The Chimæra, or the French*

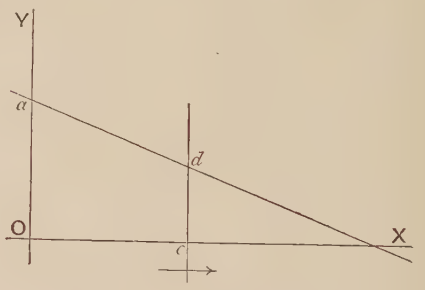
Way of Paying National Debts Laid Open, 1720. —*A Tour thro' the whole Island of Great Britain*, vol. i. 1724, vol. ii. 1725, vol. iii. 1726, republished 1727 (subsequent editions being all more or less altered).—*The Complete English Tradesman*, vol. i. 1725, vol. ii. 1727.—*Parochial Tyranny*, 1727.—*A Plan of the English Commerce*, 1728, second edition 1730.—*An Humble Proposal to the People of England for the Encrease of their Trade and Encouragement of their Manufactures*, 1729. F. C. M.

DEGREE OF UTILITY. This phrase was first made current by Jevons in his *Theory of Political Economy*, 1871. Its precise significance will be best elucidated by an analogy. "Degree of utility" stands in the same relation to "total utility" as "velocity" to "space traversed." Suppose we have a body projected vertically upwards from rest, at a given speed. We may inquire *first* at what height the body will be found at any moment after its projection, and *second* at what rate it will be moving at any point of its course, and clearly the rate of its movement is the rate at which its height is increasing (whether positively as it rises, or negatively as it falls). This rate may be measured in feet per second, or in miles per hour, or in any other suitable unit, but in any case it varies from point to point and does not continue the same during any period, however short.

We must now extend the idea of measurement to such economic conceptions as "satisfaction" and "utility." Measurement consists essentially in determining the ratio of the magnitude investigated to some other magnitude adopted as a standard; and a "satisfaction" would accordingly be measured if we could determine its ratio to some standard satisfaction, or, which amounts to the same thing, some standard dissatisfaction. Thus if I wish to measure the satisfaction derived by a hungry man from the consumption of a certain quantity of bread, I may inquire how much labour he would perform, under stated conditions, rather than go without it; or what he would pay for it sooner than go without if an unscrupulous monopolist exacted from him the extreme famine price. Thus if we take any standard we choose we can, ideally at least, conceive of any concrete "utility" or "satisfaction" being measured in it. But we must remember that such measurements are based on the relative magnitudes of different satisfactions, etc., to one and the same person, and do not profess to give us means of comparing a satisfaction experienced by one mind with a satisfaction experienced by another; for no one can say that the standard unit of satisfaction selected means the same thing to two different men. Nor shall we find that any such absolute measurement is needed for the purpose in hand.

Having premised so much, we may now work out the economic analogue of the projected body. Suppose we take such a commodity as bread supplied to a hungry man. *Firstly*, we may inquire what amount of satisfaction the man has derived from the consumption of any given quantity of bread; in which case we shall be investigating the "total utility" or "value in use" of that quantity of bread, to that man, under those conditions. *Secondly*, we may inquire at what *rate* (per ounce, per pound, etc.) the consumption of the bread is conferring satisfaction upon the man at any point in the course of his meal; and in that case we shall be investigating the "degree of utility" of the bread. This "degree of utility" will of course vary from point to point. When the man was at his hungriest he would be deriving relatively great satisfaction per ounce of bread consumed, and towards the end of his meal, when nearly satisfied, his satisfaction per ounce would be relatively small; and, theoretically, it will not remain constant during any period, however short. Now this "degree of utility" is obviously the rate at which the "total utility" is increasing; just as the velocity of a rising or falling body is the rate at which "space traversed" or "height" is increasing.

The precise relation of velocity to space traversed, and of degree of utility to total utility, is expressed mathematically by saying that the former are the "differential coefficients," "first-derived functions," or "fluxions" of the latter; and, graphically, if the latter are expressed by areas the former will be expressed by lines. In the figure, if we imagine the line



$c\,d$ moving from O in the direction of the arrow head, at a uniform rate, to represent the lapse of time, and if we imagine the area $a\,O\,c\,d$ to represent the space traversed by the projected body in the time O c, then the intercept $c\,d$ will be the differential coefficient of $a\,O\,c\,d$, and will represent the velocity of the body, or the rate at which it is rising, at the point of time represented by c. Perhaps this will be sufficiently obvious to the non-mathematical reader if he reflects that velocity represents the rate at which height is increasing, as time lapses, and observes that the length of the intercept $c\,d$ likewise determines the rate at which the area

a O c d increases as the vertical line moves in the direction of the arrow-head.

Now let the movement of the vertical from O represent the consumption of the bread, so that O c represents the amount consumed up to any given point of the meal; and let a O c d represent the total satisfaction derived from the consumption up to the point reached, then c d will still be the differential coefficient of a O c d, and will represent the rate per unit (ounce, etc.) at which the consumption of the bread is now increasing the total satisfaction reaped by the consumer. That is to say c d represents the degree of utility of bread at the point c, the amount represented by O c having already been consumed.

It should be observed, however, that when we are dealing with economic quantities, the line a d will probably never be a straight line, but always a curve of more or less complexity; and it will seldom or never be possible to determine its actual form with any precision.

The main interest naturally attaches to the degree of utility of that increment of a commodity which the consumer expects to obtain next, or which he may have to relinquish, that is to say the last increment he has secured or the next he hopes to secure. This is called by Jevons the "final degree of utility" (*q.v.*) Under this heading, FINAL DEGREE OF UTILITY, references to the most important books on the subject will be found. All that need be said here is that the analogy of the moving body insisted on above was developed by Professor Léon WALRAS of Lausanne, and was first suggested by his father, A. A. WALRAS (see FINAL DEGREE OF UTILITY). P. H. W.

DE LA COURT. See COURT, PIETER DE LA.

DE LAJONCHÈRE (beginning of the 18th century), a French engineer, was one of the numerous schemers who flourished in the times of Law and the South Sea Company. After having written on the fortification of large towns, and on a *Projet d'un Canal de Bourgogne pour la Communication des deux Mers* (1718) he published his *Système d'un nouveau Gouvernement en France* (Amsterdam 1720). Although De Lajonchère expressly denies having followed Vauban's *Dîme Royale*, he starts from the same initial principle, only, as was aptly remarked by Dupin (*Oeconomiques*, iii. 210), he urges it in an extravagant manner. He advocates one sole tax, to be paid without privilege or exemption, by all Frenchmen without distinction, to consist of a percentage collected in money or in kind, on the general produce of the ground, mines, quarries, etc., by a "Compagnie du Commerce," to be formed for the purpose. This company was to have the monopoly of foreign trade, its shares being given as reimbursement of the price of all the offices sold by the king's predecessors and of the capital of the rents due to towns or individuals. The corn collected by the company was to be sold at a permanently fixed price. The company was also to be entrusted with the recoinage and "diminutions" of the metallic currency, which were to bring it down to what De Lajonchère calls "its intrinsic value."

[See art. (*Journal des Économistes*, 9th Feb. 1863) "Un Émule de Law," by de Lavergne.]

E. Ca.

DE LA MARE, NICOLAS (1639-1723), originally a *procureur-général*, later on a *conseiller commissaire* of the Châtelet in Paris, was not an original thinker, but a most industrious, clear, and conscientious compiler, and his *Traité de la Police* (Paris, 1722-1735, 4 vols. in folio, 2nd ed.) is a copious mine of information. The second volume (book v.) deals with the regulation of food in general, and of corn in particular. In it will be found, "according to their order, all the laws, ordinances, and decrees, which have provided for this subject with as much force as wisdom." This sentence, taken from the preface, is completely characteristic of the scope of De la Mare's work, and of his commentaries. They were begun in 1677 at the request of the president of the Parliament of Paris, M. de Lamoignon, and an abridgement was made in 1758 and 1769 by La Poix de Fréminville in his *Traité de la Police*. This, however, does not enable the reader to dispense with consulting the original. E. Ca.

DEL CREDERE. A factor, broker, or mercantile agent who undertakes to become surety for the solvency of the customer with whom he transacts a sale, receives for this an extra commission called a *del credere* commission. A. D.

DELEGATION. Description used by continental bankers of a document drawn in the form of a letter of credit but intended to pass from hand to hand like a bill of exchange. These documents are used on the continent for the purpose of evading the stamp laws; English bankers are, however, in the habit of treating them as ordinary bills of exchange. They are generally sent out for acceptance provided with the bill stamp and presented after the expiration of the days of grace. It is by no means certain what effect would be given to the acceptance of such a document in a court of law, but as they are generally addressed to banks and commercial houses of good standing, and are drawn at very short dates, the question is not likely to arise. E. S.

DELFICO, MELCHIORRE (born in the latter half of the 18th century at Leognano, died about 1835 at Teramo), is generally remembered only for his *Memoria sulla libertà del Commercio*, which has been included by Custodi in his *Scrittori Classici*; but this does not quite do justice to Delfico, although undoubtedly his pamphlet on free trade is his principal contribution to economic science. Delfico was not only

an *absolute* free trader, but also what would now be called an "absolute individualist," believing in the beneficial effects of unlimited liberty of the individual in any sort of economical activity. Landed proprietors, merchants, and *entrepreneurs* in the interest of the community ought to be left to themselves and allowed to do with their property whatever they pleased.

Delfico, in his *Riflessioni sulla vendita dei feudi* and in his *Lettera al Duca di Cantalupo*, defends the abolition of feudal rights over landed properties and their sale; he sees in them an impediment to the proper cultivation of the land, which gives greater returns when the proprietor is able to do with it what he likes. For the same reason he insists on the abolition of obnoxious rights like those consisting in the right of the community to graze its cattle on the lands of the proprietors, which renders all sorts of plantations impossible (*Memoria per l' abolizione della servitù del pascolo* and *Discorso sul Tavoliere di Puglia*). All Delfico's other writings are occupied principally with different aspects of the free-trade question. He argues that a dearth of food would never happen if there were free trade, and that the means to which governments usually have recourse to avoid it, or to abate it, aggravate famine by making production unsafe and deterring merchants from risking their capital.

Although these doctrines were not new, coming ten and twenty years after Smith's criticism of the protective system, Delfico merits remembrance as a thoroughgoing follower of liberal doctrines in a time when as yet they were very rare.

The writings in which Delfico defends the principle of liberty and absolute property are in order of date the following:—*Memoria sul Tribunale della Grascia e sulle leggi economiche nelle provincie confinanti del Regno*, Napoli, 1785.—*Memoria sulla necessità di rendere uniformi i pesi e le misure del Regno*, Napoli, 1787.—*Memoria per l' abolizione o moderazione della servitù del pascolo invernale, detto dei Regi stucchi, nelle provincie marittime di Abruzzo*, Napoli, 1787.—*Discorso sul Tavoliere di Puglia e su la necessità di abolire il sistema doganale presente e non darsi luogo ad alcuna temporanea riforma*, Napoli, 1788.—*Riflessioni su la vendita dei Feudi*, Napoli, 1790.—*Lettera a Sua Ecc. il sig. Duca di Cantalupo*, Napoli, 1795.—*Memoria sulla libertà del commercio*, Accademia di Padova, 1797.—*Ragionamento sulle carestie*, Accademia di Napoli, 1818.—*Espressioni della particolare riconoscenza della provincia e città di Teramo, dovuta alla memoria dell' immortale Ferdinando I.*, 1833.—*Annali civili del regno delle Due Sicilie*, vol. i.

M. P.

DELICTUM. Expression of Roman law denoting a wrongful act—not being a breach of contract—which gave the aggrieved party the right to claim damages. The term corresponds in a certain measure to the expression Tort (*q.v.*) used in English legal language.

E. S.

DELIVERY (of Bills of Exchange). According to the law of the United Kingdom, a contract on a bill of exchange is incomplete and revocable until delivery of the instrument. The drawer of a bill of exchange may, after having accepted it, cancel the acceptance as long as the bill has not been returned to the holder, unless he has actually informed the holder that the bill has been accepted (Bill of Exchange Act, § 21). This is not so according to German law; a German acceptor having once affixed his signature to the bill is irrevocably bound (German code, § 21). The delivery required by English law need not consist of an actual transfer of possession, but may be a constructive delivery (see Delivery of chattels). As according to the regulations of the English post-office a letter, after being posted, cannot be recalled by the sender, the posting of the letter constitutes a delivery. In some other countries, the sender may stop the delivery of a letter; where this is permissible the delivery would only be final when the letter has reached the address to which it has been directed.

E. S.

DELIVERY (of Deeds). See Deed.

DELIVERY (of Chattels). In all systems of ancient law legal results are attained by solemn and overt acts only. To admit of the possibility of altering rights of ownership or of creating obligations enforceable by judicial process without the use of recognised formalities is a refinement which undoubtedly is familiar in the later stages of Roman jurisprudence, but which was slow to penetrate into Germanic countries. The principle of allowing the law to protect facts and relations created by the mutual consent of the parties concerned—sometimes authenticated by written documents, but in many cases without writing or formality of any kind—is now thoroughly established in all civilised countries; but traces of the older modes of thought are still conspicuously impressed on modern law, and more particularly on the systems of law administered in English-speaking countries. The old common law rule was that no change of ownership could be effected without a formal delivery to the new owner, called "livery of seisin," an expression afterwards used in the case of land only. Land is now transferred by deed, and "livery of seisin" is a thing of the past, but delivery is subject to the exceptions to be presently mentioned, necessary in all cases where property in chattels is to pass from one person to another. Delivery, according to modern views does not, however, necessarily involve a visible change of possession. There may be a *constructive* delivery, as where a person holding goods in one capacity (*e.g.* as agent for A)

begins to hold them in another capacity (*e.g.* as agent for B—this is a delivery from A to B); or there may be a symbolical delivery (*e.g.* the delivery of the keys of a warehouse where certain goods are may operate as a delivery of the goods). The delivery of documents of title relating to goods (*e.g.* a bill of lading) has generally the same effect as the delivery of the goods. The exceptions to which reference has been made above are the following: the property in chattels can now be transferred without delivery—(*a*) by DEED (*q.v.*); (*b*) by a sale, where the parties expressly or by necessary implication agree that the change of property is to take place immediately on conclusion of the bargain (a sale of this kind is known by the technical name of bargain and sale). The exceptions comprise a large class of transactions, but modern legislation, in view of the dangers resulting from secret changes of ownership—which enable insolvent traders to make a show of property not available for their general creditors—has, by means of the Bill of Sale Acts (see BILL OF SALE) introduced new safeguards (see the elaborate judgment of the court of appeal in Cochrane *v.* Moore, Law Reports, 25 Queen's Bench Division, p. 57; also Benjamin on *Sales*. E. S.

DELIVERY, GOOD. On the stock exchange stock is said to be delivered when it is actually supplied to the buyer, and the delivery is good or not according to the rules of the stock exchange, and the nature of the contract between the buyer and the seller. Contracts are largely made in a manner too rough and ready to permit attention to every stipulation. That is understood, and when a dispute arises the Committee of the London Stock Exchange is appealed to, and the decision often turns upon the question whether the stock or share tendered by the seller constitutes a "good delivery." If, for example, the numbers on the shares delivered are not the numbers which have obtained an official quotation on the stock exchange, the delivery is bad and not good. If, for another example, the shares in an American railway do not bear the proper stamp imposed in this country, the delivery again is not good, but is not irremediably bad. The term "good delivery" covers compliance with the official rules and reasonable conditions on which business is transacted in the stock exchange, but, in practice, the question only arises in two cases—first, when the numbers of the securities do not agree with those for which an official quotation has been granted, and second, when the bond has been tampered with by the holder. This often happens through coupons being carelessly cut off, or having the name of the holder written on them in ink, or through being torn or damaged. A. E.

DE LUCA, GIOVANNI BATTISTA (1614-83), was born at Venosa, became a lawyer in Naples, and was made cardinal by the pope Innocent XI. De Luca is best known as a lawyer, but he wrote also on economical and fiscal questions in his two treatises: *Theatrum veritatis et justitiæ*, Romae, 1669; and *Il Principe cristiano pratico*, Roma, 1679.

As an economist he is a "mercantilist" of the very narrowest species. International commerce, in his opinion, is only a means of getting money from foreigners; raw materials are to be allowed to be imported, but their export is to be prohibited, because only when they are transformed by national industry will they procure a favourable balance of commerce. Money is not to be falsified by the prince, but its export, and also the export of bullion, is to be prohibited, except for the acquisition of those wares which cannot be produced by the country. Famines are to be guarded against by a subtle system of regulation.

In normal times agriculture is to be aided and importation of foreign produce to be prohibited. In case of famine all are to sell their produce to a public office (*Ufficio annonario*, a sort of store for corn under government administration), which is not to pay for it immediately, because in similar calamities "men tend to become communists." Supporting economical doctrines such as these, De Luca shows himself to have been inferior to a great many of his contemporaries, who had already seen through the grossest errors of the mercantile system. In financial questions he takes a better position. First of all he has a clear idea of the historical relativity of institutions, so that when he discusses the question, whether direct taxes are to be imposed with the consent of parliaments, he insists upon this being decided differently in different nations, and with due regard to the different customs and political maturity of the various nations.

Taxes in general, he considers, ought to be levied in such a manner that people pay them insensibly, that tax collectors cannot exact more than the government receives, that all citizens, without privilege and exemption, come to bear a proportionately equal burden, and that no tax be imposed when not absolutely necessary for the existence of the state. De Luca distinguishes correctly the revenue from the private property of the sovereign, and makes a most minute examination of all the different descriptions of crown rights. He defends the state monopoly of salt and tobacco. M. P.

DEMAND. By "demand" in political economy is meant what may be more distinctively called *effective* demand, that is, not the mere desire for anything, but desire accompanied by the offer of something valuable in exchange. When, therefore, there is a demand for any commodity or service, there must be a supply of some other commodity or service, which is

proffered in exchange for it; and when two persons are engaged in exchange, what the one demands the other supplies, and *vice versâ*. It follows that demand and supply considered as aggregates are strictly interdependent, and that neither can increase or diminish without necessitating a corresponding increase or diminution of the other. This simple consideration disposes of the fallacy that there may be an over-supply of commodities in general. At the same time, the two different aspects of the phenomenon of exchange are clearly to be distinguished from one another. Demand depends upon men's desires to satisfy their wants by acquiring a command over new goods or services, supply upon their willingness to undergo efforts or part with goods already in their possession. Some of the older economists, *e.g.* Ricardo, tended to concentrate attention upon the conditions determining the supply of commodities, to the comparative neglect of the analysis of demand. This aspect of the problem has, however, been brought into special prominence in recent years by the full discussions of "utility" and "subjective value," which are characteristic of Jevons and the Austrian school. The importance of a full consideration of the side of demand as well as of supply also receives ample recognition in Professor Marshall's *Principles of Economics*.

Assuming the use of a medium of exchange which represents general purchasing power, the question has been raised whether the demand for any commodity should be measured by the quantity of the commodity demanded or by the quantity of purchasing power offered in exchange for it. Cairnes, criticising Mill, considers that on scientific grounds we are bound to select the latter of these alternatives. There is not, however, any fundamental difference between the two when properly interpreted. The quantity of any commodity which people are willing to buy, and the amount of money which they are willing to spend upon it, are, generally speaking, equally indeterminate so long as nothing is said as to the price at which it is to be had. If, then, we measure demand by quantity demanded, it can only be with reference to some particular price or schedule of prices; and hence some specific quantity of purchasing power offered is necessarily implied. But the same is true, *mutatis mutandis*, if we start from the quantity of purchasing power offered. For example, to say that at half-a-crown a pound you will buy six pounds of tea is precisely equivalent to saying that at that price you will spend fifteen shillings on tea. It may sometimes be more convenient to adopt the mode of expression preferred by Cairnes; but usually the other alternative is simpler and less liable to lead to error, since supply and demand can in this case be more directly compared and equated. The *demand* for any commodity at a given price may then be measured by the amount that would be purchased if obtainable at that price; and the *supply* at a given price may be correspondingly measured by the amount that would be offered for sale at that price. If the amount instead of the price is regarded as the independent variable, then the *demand-price* for a given amount of any commodity may be defined as the price just required to attract purchasers for that particular amount; and correspondingly the *supply-price* as the price just required to cause that particular amount to be offered for sale.

It is clear, however, that the circumstances of demand will be very incompletely expressed, if given with reference to some one particular price only or some one particular amount only. We need what Professor Marshall calls a *demand-schedule*, in which the demand at varying prices is recorded. For example, it may be that in the early spring a person will buy one basket of strawberries at ten shillings a basket, two at seven shillings and sixpence, three at six shillings, four at five shillings, and so on. A statement of this kind is said to constitute his demand-schedule for strawberries at the time in question. If the requisite knowledge were forthcoming it would be possible to draw up a schedule of the same kind representing the total demand for any commodity within a given range and over a given period. The variation of demand with price may also be expressed diagrammatically, and the exposition of the general theory of supply and demand may be much facilitated thereby (see DEMAND CURVES).

With improved statistics of consumption, towards which valuable contributions might be afforded by shopkeepers' books and the great co-operative stores, it might be possible to draw up empirical demand-schedules representing approximately the actual variation of demand with price for certain commodities in general use. As Cournot remarks: "If we suppose the conditions of demand to remain the same, but the conditions of production to change, because the expenses of production are raised or lowered, or monopolies put on or suppressed, or taxes increased or diminished, or import duties imposed or removed, then price will vary, and the corresponding variations in demand will give us our empirical tables" (*Principes de la Théorie des Richesses*, § 56). But, as is also recognised by Cournot, the conditions of demand rarely do remain the same for any considerable length of time. There are constantly in progress independent changes, such as changes in fashions and habits, in the purchasing power of money, in the wealth and circumstances of consumers, and the like, which cause the demand at a given price itself to vary. Since, therefore, the statistical calculation would have to cover a

more or less prolonged period of time, it would always be liable to be vitiated by the effects of such changes as the above, except in so far as these effects could themselves be estimated and allowed for.

For theoretical purposes, however, the inquiry into the variation of demand with price is of the greatest value and importance, independently of any exact empirical constructions. Without elaborate statistics it is possible to determine a *law of demand* to which all demand-schedules will conform, namely, that—other things being equal—a rise in price will be accompanied by a diminished demand and a fall in price by an increased demand. Looked at from the other side, the law may also be expressed by saying that the greater the amount of any commodity offered for sale in a market the lower will be the price at which it will find purchasers.

The above law of demand is a corollary from the law of diminishing utility, namely, that the additional satisfaction which a person derives from an additional increment of any commodity diminishes as the stock of the commodity already in his possession increases. For it clearly follows from this law of diminishing utility that if the general purchasing power of money remains unchanged, then, as the amount of a thing which a person already has increases, the price that he is just willing to give for an additional increment will diminish.

It is an important question how far continuity may be assumed in the variation of demand with price, so that any alteration in the latter, however slight, cannot fail to be accompanied by some alteration in the former. Such an assumption clearly cannot, in general, be justified so far as the demand of individual consumers is concerned. Individual changes in demand will almost always be discontinuous; in other words, there will almost always be more or less wide limits of price within which demand will be constant. The price of coal, for example, might go on rising for some time without leading any given householder to reduce his consumption of coal, although he would probably take steps to economise to a material extent when the rise in price reached a certain point. It is different, however, when we consider the *aggregate* demand for a commodity in general use. Individuals of all degrees of wealth and all varieties of taste will now contribute towards the result, and it becomes a fair assumption that every change in price will affect the demand of certain of them, even if it leaves the demand of others unaffected. It may further be assumed that, as Cournot puts it, "demand does not pass suddenly from one amount to another without passing through the intermediate amounts." The assumption of continuity becomes, for obvious reasons, specially important in the mathematical or diagrammatic treatment of the law of demand.

In speaking of demand as varying with price it is not of course intended to imply that there is any exact proportion in which the one rises or falls as the other falls or rises. No two commodities are likely exactly to resemble one another in this respect, and even in the case of the same commodity there will be differences at different points. Thus, supposing price to fall fifty per cent, demand might in some cases be increased two or three hundred per cent; it is possible, for instance, that quite a new class of consumers might now be induced to buy the commodity, or it might be worth while to put it to quite a new use. In other cases, the increase in demand might not exceed ten or fifteen per cent, the wants of old purchasers being quickly satiated, and not many new purchasers being attracted. In the former case, demand is said to be very elastic; and in the latter case very inelastic. Professor Marshall gives the following definition: "The *elasticity of demand* in a market is great or small according as the amount demanded increases much or little for a given fall in price, and diminishes much or little for a given rise in price" (*Principles of Economics*, vol. i. 1891, p. 160); and he afterwards lays down, as a general law of variation of the elasticity of demand, the principle that as a rule the elasticity of demand of any given class of consumers for a given commodity is great for medium prices, and small for those which, relatively to the means of the consumers in question, are very high or very low. For so long as price remains very high considerable elasticity is out of the question, while it may, on the other hand, fall so low as to reach what may be called satiety point, consumers already buying as much as they practically care to consume. It is important to recognise that at any given point the demand of one class of consumers may be elastic, while that of other classes is inelastic. In the case of game, for example, the demand of the upper middle class at the present time in England is probably very elastic, while it is much less so on the part of the rich, whose consumption would not appreciably be affected except in the case of very great scarcity, and on the part of the lower middle and working classes, for whom any moderate fall would still leave the price too high.

Unless we confine ourselves to very short periods of time, demand-schedules are themselves liable to modification. For the conditions of demand are constantly changing; and this, as we have already seen, is one of the chief difficulties in the way of obtaining accurate empirical data in regard to the variation of demand with price. A change of fashion, for example, might cause the demand for lace to be greater at every point throughout the list of prices. A spread of teetotalism would, *cæteris paribus*, have a similar effect upon the

demand-schedules for certain kinds of drink; and an increase of population upon the demand-schedules for most kinds of food. In all these cases there may be said to be a *rise in the demand-schedule*.

In connection with this point, attention may be called to an ambiguity generally attaching to expressions that relate to variations in demand. The law of demand above laid down is the statement of a variation of demand with price which is manifested in every demand-schedule; and it may perhaps be said to relate to a static condition of things, in which there is supposed to be no change in the number of purchasers or in their circumstances or tastes. But we may pass to the hypothesis of a dynamic condition, in which such changes as these do take place. We then have to recognise, as just pointed out, that the amount of any commodity demanded at a given price is itself subject to variation, or that, in other words, demand-schedules may themselves rise or fall. By an "increase of demand," therefore, may be meant either, first, the extension of demand which results under static conditions from a fall in price, or, secondly, an increase in the quantity demanded at a given price which may occur under dynamic conditions. Professor Sidgwick, who explains this ambiguity very clearly, remarks that it will be convenient to have two unambiguous terms to distinguish the two different kinds of change in demand; and he accordingly proposes to speak of the former kind of increase as an *extension* of demand, and of the latter as a *rise* or *intensification* of demand. For the opposites of "extension" and "rise" respectively, he uses the terms "reduction" and "fall" (*Principles of Political Economy*, 1887, p. 179).

[The articles on FINAL DEGREE OF UTILITY, SUPPLY, and SUPPLY AND DEMAND, EQUILIBRIUM BETWEEN, should be read in connection with the present article. The subject of *demand* is discussed in all systematic works on political economy; but the reader may be specially referred to Marshall's *Principles of Economics*, bk. iii.] J. N. K.

DEMAND CURVES represent the relation between the effective demand for a commodity and the terms on which it can be obtained. The simplest form is where one axis, as OY in the annexed figure, represents price, and the other axis, OX, the quantity of a commodity demanded by a certain individual at that price. Thus at the price Oq the quantity Op is demanded. The curve thus representing the dispositions of a single person may be termed an "individual" demand curve, as contrasted with the "collective" demand curve appertaining to a group of persons such as a market or a nation. The collective curve for a group may be derived from the individual curves of the persons forming the group by adding, for each price, the amounts demanded by all the individuals at that price, and taking this sum as the abscissa of the collective curve; the ordinate as before representing price. The collective curve may be represented by Fig. 1, if the scale is altered

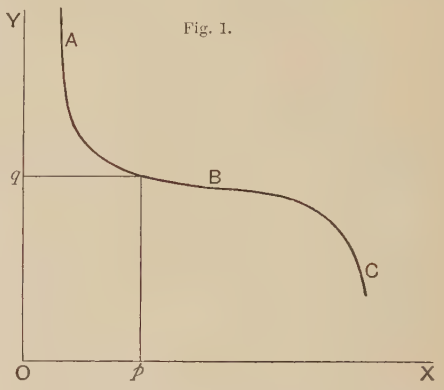


Fig. 1.

so that a unit of the abscissa should represent a larger amount of commodity than when the figure stood for an individual demand curve. This method of representing demand by a curve was introduced by Cournot in his *Principes Mathématiques de la Théorie des Richesses*, 1838. It is remarkable that he began and ended with the collective demand curve, instead of deriving it from the individual curve like many recent writers. Another kind of demand curve is formed by taking one axis as before to represent the quantity of the commodity demanded, while the other axis represents, not as before, the price of each unit of commodity, but the total amount of money (or other article of exchange) corresponding to each amount demanded. Thus in Fig. 2 the curve denotes that

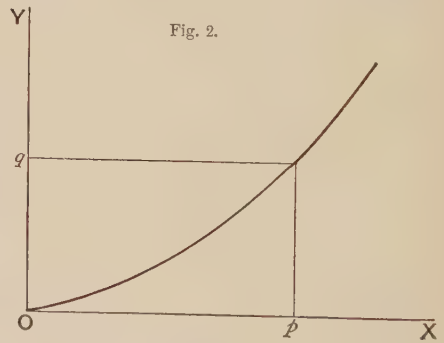


Fig. 2.

for the amount of money (or any other specified article, say x) Op, there is demanded the amount Oq of the article y. This construction was first introduced by Prof. Marshall in a paper read before the Cambridge Philosophical Society, 1873 (to which reference is made in the preface to the first edition of the author's *Principles of Economics*.) The construction is specially suitable to the case where there is a certain symmetry

between the conditions of supply and demand, as in international trade. It will be observed that the curve in Fig. 2, which has been described as the demand curve with respect to the article y, may also be regarded as the supply curve with respect to the article x; since it represents the amount of the article x which the party or parties under consideration are willing to supply for each amount of y. This kind of demand curve, like that which was first described, may be divided into two species, individual and collective. Another kind of demand curve is used by Prof. Walras in his *Éléments d'Économie Politique Pure*.

The demand curve is a potent aid to abstract theory. It expresses better than ordinary language the relation between price and quantity demanded; of which in general we know only that the quantity varies inversely with the price, but are ignorant what is the law of variation. This ignorance is sometimes not complete; we may know that for the same fall in price the demand increases much more rapidly in the case of one commodity than another; or for the same commodity at different prices. This difference of ELASTICITY is elegantly expressed by the shape of the curve. In the case represented by Fig. 1 the demand is very elastic in the neighbourhood of B, very inelastic in the neighbourhood of A and C. The case thus represented is a very general one. In Prof. Marshall's words "the elasticity is small when the price of a thing is *very high* relatively to their means [those of the class of purchasers under consideration], and again when it is *very low*; while the elasticity is much greater for prices intermediate between what we may call the high level and the low level." The use of some such device as the demand curve is required for the perfect apprehension of the theory of value. The relation of "individual" to "collective" demand curves best expresses the dependence of the objective fact of price on the subjective dispositions of individual persons. The position of equilibrium towards which the "higgling of the market" tends is best represented by the intersection of a demand with a SUPPLY CURVE (*q.v.*) Ordinary language does not well discriminate the change in price due to a change in the quantity of commodity supplied, the dispositions of the parties remaining the same, from that change which is due to alterations in taste. The latter sort of change is expressed by the shifting of the demand curve from *right* to left (or conversely), so that to every quantity of commodity there corresponds a higher (or lower) price. The demand curve is employed by Prof. Marshall in the proof of several recondite, not to say paradoxical theorems. "If a given aggregate taxation has to be levied ruthlessly from any class, it will cause less loss of CONSUMERS' RENT (*q.v.*) if levied on necessaries than if levied on comforts." (*Principles of Economics*, bk. v. ch. xii. § 4, note, 2nd ed., cp. *ibid.* § 6). The doctrine that "the maximum satisfaction is generally to be attained by encouraging each individual to spend his own resources in that way which suits him best" is seen by the aid of the demand curve to be inaccurate.

The theory of the demand curve must be received with the following cautions and reservations. First (1) it should be observed that there are "many classes of things the need for which on the part of any individual is inconstant, fitful, and irregular," for instance "wedding cakes, or the services of an expert surgeon" (Marshall, *Principles of Economics*, bk. iii. ch. iii., § 5, 2nd ed.) The *individual* demand curve in such a case is discontinuous. But the corresponding *collective* curve will be less irregular. "The fickleness of the individual is merged in the comparatively regular aggregate of the action of a large number of people" (*Ibid.*) Again (2) in comparing the elasticity of demand curves for different commodities care must be taken about the units both of money and commodity. The same dispositions on the part of purchasers will appear more or less "elastic," according as they are expressed in hundredweights or tons, in pounds or shillings. An ingenious method of avoiding this fallacy is given by Prof. Marshall (*Principles of Economics*, bk. iii. ch. iv. § 1). Again (3) demand curves as usually understood involve a postulate which is frequently not fulfilled; namely, that while the price of the article under consideration is varied, the prices of all other articles remain constant. This postulate fails in the case of rival commodities such as beef and mutton. The price of one of these cannot be supposed to rise or fall considerably without the price of the other being affected. The same is true of commodities for which there is a "joint demand"—as for malt and hops. And in the case of a necessary of life the price cannot be supposed to increase indefinitely without the prices of other articles falling, owing to the retrenchment of expenditure on articles other than necessaries. The price of clothes has been known to fall during a famine (F. Newman, *Lectures on Political Economy*). It is true indeed that the postulate which has been stated might be dispensed with. But this can only be done at the sacrifice of two of the characteristic advantages which demand curves offer to the theorist. First, unless this postulate is granted, it is hardly conceivable that, when the prices of several articles are disturbed concurrently, the collective demand curve may be predicted by ascertaining the disposition of the individual—a conception which, as employed by Prof. Walras (*Éléments d'Économie Politique*, Art. 50), aids us to apprehend the workings of a market. Secondly, when the prices of all commodities but one are not

supposed fixed, there no longer exists that exact correlation between the demand curve and the interest of consumers in low prices which Prof. Marshall has formulated as "consumer's rent." In considering this relation care must be taken to distinguish between demand and desire. The effective demand of the rich and poor man for oatmeal may be the same. But the intensity of desire is not the same, if the one uses the article to feed his horses, the other for his own frugal meal. Again (4) there is an artificial rigidity in demand curves which imperfectly corresponds to the flux character of human desires. One cause of change is the formation of new habits; the disturbance of the demand curve thus caused is well represented by Messrs. Auspitz and Lieben (*Theorie des Preises*). The increased use of petroleum is not to be ascribed simply to the fall in price, the demand curve being supposed constant, but rather to the fact that "petroleum and petroleum lamps have become familiar to all classes of society" (Marshall). One important cause of alteration in demand curves is the increase of the consumer's purchasing power. The case in which that increase is only apparent, being due to a rise in prices (and the converse case), may be specially distinguished. Owing to the variability, it may be doubted whether Jevons's hope of constructing demand curves by statistics is capable of realisation. In the financial year 1890-91, after the reduction of the tax on tea effected by Goschen, the quantity of tea consumed per head was greater than in the previous year. Is it possible to determine whether this change is due to the cheapening of the article—the demand curve being supposed the same—or to an alteration of the demand curve caused partly by a change of taste and partly by an increase in prosperity? Some suggestions for evading these and other difficulties will be found in the third book of Prof. Marshall's *Principles of Economics*.

For further considerations and fuller references, see MATHEMATICAL METHOD. F. Y. E.

DEMAND SCHEDULES. See DEMAND.

DEMESNE. Before the statute "Quia Emptores" (1290), a person wishing to alienate land did not entirely sever his connection with the land; he remained the feudal tenant of the king or superior lord, and continued to perform the duties which the tenure imposed upon him, but was at the same time the feudal lord (mesne lord), of the new tenant. That portion of the manor which the lord did not grant to freehold tenants in the way just described was called his demesne; it was either under the immediate management of the lord or it was let out to persons in a subordinate position called "villani" who held at the lord's will, but gradually acquired a customary right to fixity of tenure. The successors of the "villani" are the copyholders of the present day (see COPYHOLD). That part of the crown lands which was not granted to any feudal tenants but remained under the management of royal stewards is, in a similar way, called the "royal demesne," and part of the hereditary revenue of the crown was formerly derived from it. Since the accession of George III. this revenue has been appropriated by parliament, the sovereign receiving a fixed annual sum (see CIVIL LIST) in exchange. E. S.

DE METZ-NOBLAT, ALEXANDRE (1820-1871), born at Colmar, died at Nancy. His first occupation was the law, and he was called to the bar. But he preferred the profession of literature, and soon displayed a predilection for economic study. His principal work, published first in 1853 (2 vols. in 8vo), was entitled *Analyse des phénomènes économiques*. This, after receiving some not very important alterations, was republished as *Les lois économiques*, the first edition in 1867 (1 vol. in 8vo), the second in 1880 (1 vol. in 12mo). This work is, practically, a complete treatise on political economy; the author was professor of this science from December 1864 at Nancy, a chair which still exists. Here De Metz-Noblat made the mistake of failing to keep religion sufficiently apart from economic science—but he was a man truly liberal in spirit. He was a disciple of Malthus, and his works deserve to be read even at the present day. A. C. f.

DEMISE. Used as a substantive noun and as a verb in the same way as the word "lease," and denoting the letting of land or premises for a number of years. E. S.

DEMOGRAPHY. This word, already unanimously adopted of late years by continental nations, has only recently sought naturalisation in England. It still remains to be seen whether the attempt will only be partially, instead of entirely, successful. The word "*Démographie*" was invented by Dr. Achille Guillard, and occurs in the title of his book *Éléments de Statistique Humaine ou Démographie Comparée*, Paris, 1855, intended to be "an exposition of this new science as illustrated by the most authentic documents relating to the condition, the general movement, and the progress of population in civilised countries.' It should be observed that statistics are very properly made the very soul of this so-called new science by Guillard, although he might have found a more apposite epigraph to his book than the somewhat crude one from Proclus, "How sublime human understanding has been in the creation of number."

Guillard ventures further to define demography as the natural and social history of the human species, or as the mathematical knowledge of populations, their general movements, their physical, social, intellectual, and moral condition. All this is, however, merely a new name for something very old. Writers in

almost every country have, in the past three centuries, foreshadowed the existence of normal, or mathematical, laws of population. What they failed in, as compared with writers of our own times, was the want, for which they had no help, of adequate or authentic illustrative statistics. Thus our own Petty and Graunt, in the 17th century, had to rely upon very scanty parochial and other registration of births and deaths, restricted also to the metropolitan area, in their very ingenious general inductions respecting the laws of population. In certain instances such statistical observations, partial and few as they may have been, sufficed to suggest to great minds the method of deducing a mathematical law. Thus with De Witt in constructing a table of annuities in Holland in 1672, and with Halley later on in doing the same in a more complete way from the Breslau observations. In the 18th century population statistics came to be more abundantly available, and stimulated the composition of such works as those of Price, Malthus, etc. in England, Süssmilch in Germany, Moreau in France. In the 19th century we have had abundance of labourers in the same (shall we call it demographic?) field—Milne, and Farr, and numerous others, in England. The same in France and Germany, etc.—for instance, Quetelet, Legoyt, Block, Levasseur, Engel, and Berg. All these have contributed so much to a knowledge of the principles which regulate the laws of the movements and increase of population in its various aspects, that but little is left to constitute demography a new science.

The word demography has, to a certain extent, been familiarised to English ears by the occurrence in 1891 of a Congress of Hygiene and Demography in London. This is a peripatetic body, and its previous sessions had been held in continental capitals. Notwithstanding some admissible advantages accruing from such occasional meetings as these, it can scarcely be pretended that much fresh knowledge as to statistical and mathematical deductions respecting population was added by them to the general stock; there was more room in them for the general outside public than for scientific experts. Hence arose a frequent degeneracy into occupying time with hypotheses regardless of statistical evidence, a repetition of such eccentricities as contributed not a little to the final collapse some years since of the Social Science Association. A better organisation in some respects, although still by no means a perfect one, for discussing the population and census statistics of great countries, or, in other words, demography in its most important aspects, exists, however, in the International Statistical Institute, composed almost wholly of representative experts, limited as to number, from almost all European countries and from the United States, who meet biennially in different countries; for example, in 1891 the session was held in Vienna, in 1893 in Chicago, in 1905 in London, and in 1909 in Paris. F. H.

DEMOIVRE (or De Moivre), Abraham (1667-1754), an eminent French mathematician, born at Vitry, after the revocation of the Edict of Nantes retired to London, where he supported himself by giving private lessons in mathematics. A life of privation, in which mathematical discoveries were the principal events, terminated in London 1754. The scientific eminence of Demoivre is evidenced by Newton's habitual saying "Go to Mr. Demoivre, he knows more than I about these matters." Pope bears witness to his fame in a well-known verse,

"Sure as De-moivre, without rule or line."

[Of the spider, *Essay on Man*, ep. iii. l. 104.]

Demoivre not only improved the theory of the calculus of probabilities by his *Doctrine of Chances*, but also extended its application by his *Annuities upon Lives*. Many of the methods now employed by actuaries may be traced back to this great mathematician (see Farren, *Historical Essay on . . . Life Contingencies*, p. 46). Demoivre is, however, most remembered by statisticians for his hypothesis that the probabilities of living any number of years after the age of twelve (see *Annuities*, 1st ed. Problem II.) decrease in arithmetic progression up to the age of eighty-six (taken as the extreme limit of human life). The formula may be thus simply written: lx (the number alive at any age x see Life Tables) is proportioned to $86 - x$ (cp. *Assurance Magazine*, vol. iii.) This law, roughly corresponding to the observations, long served as a good working hypothesis, and even still affords useful exercises (see Sutton, *Life Contingencies*). Demoivre also entertained the hypothesis that the probabilities of life decrease in a *geometrical* progression (*Annuities*, 1st ed., Problem III.), an assumption which lends itself better to the calculation of joint contingencies, but, being less agreeable to the facts, has not found currency.

The first edition of the *Doctrine of Chances* (preceded by an earlier contribution to the calculus of probabilities, *De Mensurâ Sortis*) appeared in 1718; the third, purporting to be "fuller, clearer, and more correct than the former," in 1756. The first edition of the *Annuities upon Lives* appeared in 1724-25, the fourth in 1752. The treatise appears with some modifications, being the "most improved edition" according to Baily, at the end of the third edition of the *Doctrine of Chances*, with the secondary title, the *Doctrine of Chances applied to the Valuation of Annuities*.

[References to Demoivre will be found in most of the leading works on Assurance and cognate subjects. The following may be specially mentioned: R. Price, *Reversionary Payments*,

arranged and enlarged by W. Morgan (1812), ch. iv.; F. Baily, *Doctrine of Life Annuities and Assurances*, preface; W. Sutton, *Life Contingencies*, ch. vi. *et passim*. See also the *Assurance Magazine*, vols. iii., xii., xiii., xv. This magazine, in the vol. for 1869, contains an interesting generalisation of Demoivre's hypothesis. Some traits of Demoivre's personality are recorded in the *Mémoire sur la vie et sur les écrits de M. Abraham de Moivre*, par M. Maty.] F. Y. E.

DEMOLOGY. See DEMOGRAPHY.

DEMONETISATION. The discontinuance by a government of the use of a coin, and its official withdrawal from circulation, are known as its demonetisation. A recent instance of such an operation was furnished in this country by the complete withdrawal from circulation of *all* pre-Victorian gold coins; carried out under the Coinage Act, 1889, and the royal proclamation of the 22nd November 1890.

The coins received and exchanged at the mint between 13th December 1889 and 28th February 1891, were of the value of £2,334,573 in sovereigns, and £128,575 in half-sovereigns, of which £12,776 in sovereigns and £712 in half-sovereigns were received through the Sidney Mint, and £30,168 in sovereigns and £2015 in half-sovereigns through the Melbourne Mint.

1889-1891.	Sovereigns.	Half-sovereigns.	Total.
Deficiency in weight	£42,352	£6,353	£48,705
Deficiency in standard	2,403	129	2,532
Total deficiency	£44,755	£6,482	£51,237

The average deficiency of weight of the sovereigns was 2·236 grains, and that of the half-sovereigns 3·046 grains; while that due to the incorrectness in standard fineness amounted to an average of 0·246 penny per £ sterling.

Prior to the issue of the above-mentioned proclamation, guineas and half-guineas were still "legal tender" for payments, although none had been coined since 1816, and they had long since disappeared from circulation. These coins are now, therefore, legally, as well as actually, removed from the currency of the country. The Order in Council of 16th March 1892 authorised the withdrawal and exchange of light gold coins. Since that date to the present time (1912), the light gold withdrawn (United Kingdom) has been of the value of £39,845,000 in sovereigns, and £29,855,000 in half-sovereigns.

1892-1912.	Sovereigns.	Half-sovereigns.	Total.
Deficiency in weight	£390,311	£521,281	£911,592
Deficiency in standard	11,652	8,210	19,862
Total deficiency	£401,963	£529,491	£931,454

The average deficiency of weight of the sovereigns was 1·19 grains, and that of the half-sovereigns was 1·03 grains.

Coin to the value of about £1,537,000 has been withdrawn from the Australian Mints during the same period. The particulars of the Australian light gold withdrawn in 1912 are as follows:—

	Nominal Value.	Deficiency in Weight.	Deficiency in Weight per Piece.
		£ s. d.	d.
Sovereigns	£13,084	137 8 9	2·521
Half-sovereigns	8,294	167 0 1	2·416
	21,378	304 8 10	

The demonetisation of a coin must generally involve loss. If the countries of the Latin Union were to adopt a gold standard, instead of the present *étalon boiteux*, the demonetisation of the standard silver five-franc piece would, at the present price of silver (1914), entail considerable loss. That coin contains 22·5 grammes of fine silver which, with (English) standard silver at the (gold) price of 26½d. per ounce, would be worth 19·16d. only, whereas it is now rated at 47·62d. (5 francs at 25·22 fc. = £1). The loss therefore would amount to more than 2s. 4d. per piece. A similar result would accompany the demonetisation of the standard silver dollar of the United States; a coin which when first issued yields a considerable SEIGNORAGE (*q.v.*) to the state. In connection with this subject the fact should not be lost sight of that whereas metal in the form of coin is of a known standard, and is received without question as to its fineness, ingots must be assayed in order to ascertain their purity, and this operation, involving expense and delay, tends to make the exchange value of coin stand at a somewhat higher figure than that of unstamped bullion. F. E. A.

[See also ALTERNATIVE STANDARD.]

DEMONSTRATIVE LEGACY. A legacy of a portion of a particular fund, as, for example, where a testator bequeaths £1000 out of his reduced three per cents. If the fund out of which it is payable fail, the legatee is nevertheless entitled to have the legacy paid out of the general assets, and even if the general assets are insufficient to pay all the legacies, the legatee is entitled to his legacy in full.

[Williams on *Executors* (pp. 11-65), London, 1879.] J. E. C. M.

DEMURRAGE. Compensation payable to a shipowner for detention of a ship in a port beyond time stipulated in the CHARTER PARTY (*q.v.*). E. S.

DENARIUS. Roman silver coin first struck 269 B.C., seventy-two being coined to the pound. Design—obverse, the head of Roma and the letter X indicating ten *asses*; reverse, the Dioscuri on horseback, charging. From 217 B.C. eighty denarii were struck to the pound. In 100 B.C. a new type was introduced, and from 93 B.C. many different kinds were in use.

[Wm. Till, *An Essay on the Roman Denarius*, London, 1837.—J. Y. Akerman, *A descriptive Catalogue of rare and unedited Roman Coins*, London, 1834.—Also see *Encyclopædia Britannica*, 9th ed., vol. xvii., art. Numismatics, § ii.—Roman Coins, p. 652.] F. E. A.

DENARIUS DEI (*God's penny*). Earnest money which passed at the making of a bargain. This was regarded as a binding transaction by the custom of the merchants (*Carta Mercator*, 31 Ed. I. c. 4). It had several local uses and names. Originally, perhaps, a penny given to the church or to the poor at the conclusion of a bargain. Also mentioned as a port-due, an exaction forbidden, however, by statute. In this sense the term is usually corrupted as *Adieu*—the customer's "farewell" or "God-speed."

[Maitland in Selden Soc., ii. 130; Hall, *Customs*, ii. 166.] H. Ha.

DENIER (Coin). The word denier, originally merely the French rendering of the Latin *denarius*, was adopted by the early kings of France as a name for a coin of pure silver, the weight of which was originally about one pennyweight (or denier). In the reign of Charlemagne (768-814) it weighed about twenty-seven or twenty-eight grains, in the reign of Charles le Chauve (843-877) thirty-two grains, and in that of Hugh Capet (987-996) about twenty-four grains. A small amount of copper was first added to the metal of which these coins were made in the year 1103, and from that time onwards the amount was continually increased. In the year 1577 deniers were struck which were composed of pure copper.

In the reign of Louis IX. (1226-1270) a coin of fine gold, called a "*Denier à l'Agnel*" was struck, as well as two kinds of silver deniers called respectively "*Denier Tournois*" and "*Denier Parisis.*" From this time the word denier was used as the name for several coins, the identity of which was determined by qualifying words, such as, "*de l'or à l'Escu,*" "*de l'or au Fleur de Lis,*" "*Parisis,*" etc.

The following is a list of some of the more important issues of coins bearing the name Denier:

Gold Coins.

Reign.	Coin.	Weight.	Fineness.
Louis IX. (1226-1270)	Denier à l'Agnel	64 grains	Fine
Philippe le Bel (1285-1314)	Denier à l'Escu	71 grains	Fine
Philippe de Valois (1327-1350)	"	71 grains	Fine
"	"	71 grains	23 carats
John (1350-1364)	"	71 grains	22¾ carats
"	"	71 grains	21 carats
"	"	71 grains	18 carats
"	Denier au Fleur de Lis	77 grains	Fine

The coinage of "Deniers à l'Escu" was discontinued in the year 1354.

Silver Coins.

Reign.	Coin.	Weight
Philippe le Bel, Louis Hutin, Philippe le Long (1285-1321)	Denier Tournois	17½ grains
	Denier Parisis	17 grains
Charles le Bel (1321-1327)	Denier Parisis	17 grains
"	"	13½ grains
Philippe de Valois (1327-1350)	"	27½ grains

F. E. A.

Denier (Tax). The *Denier à Dieu* (see Denarius Dei) was originally a small extra sum paid on the conclusion of a sale or bargain and applied to a charitable purpose. It has since come to mean a ready-money payment handed over to bind a bargain, especially in the engagement of labourers, servants, or lodgings. R. L.

Denier (as denoting Price). The word *Denier* is now obsolete in French as the name of a coin, but it has survived in many phrases of common use. The peasant, in France, who borrows money still describes the rate of interest as *denier-vingt* or *denier-dix* as the case may be (one in twenty or one in ten), instead of saying 5 per cent or 10 per cent. M. Leroy-Beaulieu among other economists sometimes employs the same expression conversely, as when suggesting that the valuation of land should be raised from *denier-vingt* to *denier-vingt-cinq* or from twenty to twenty-five times the rental. In his *Traité de la Science des Finances*, referring to Pitt's plan for the redemption of the land tax, in 1798, he says: "The price of 3 per cent consols was 50, that is to say sixteen to seventeen times the annual interest; in other words, they were negotiated at *denier seize* or *denier dix-sept*, but landed property sold at *denier trente* or thirty times the revenue," etc.

Shares in mining companies founded before the French Revolution are still called *deniers*, the total capital being represented by 240 to 300 *deniers* according to the variations in the value of the *livre* from twenty to twenty-five sols, the sol being twelve deniers. If calculated at twenty sols the part proprietor of a company was said to possess one, two, or ten deniers, meaning $\frac{1}{240}$, $\frac{1}{120}$, or $\frac{1}{24}$ of the total stock. The capital of the great Anzin collieries, which date from 1757, is formed of 288 deniers or full shares, the value of one of which was a few years back as high as £50,000. They are, however, now divided for negotiation into hundredth parts called *centièmes de deniers*, which are quoted under that name on the mining exchange. The widow's mite is still *Le denier de la Veuve*; Peter's Pence, *Le denier de St. Pierre*; public money, *les deniers publics*, etc. (see also Denarius.) T. L.

DENIERS DE CALAIS (or Devoirs de Calais)—Calais dues or Calais toll; a fine of 19d. per sack of wool paid to the crown by

merchants for license to export staple commodities elsewhere than to Calais.

[Hall, *Customs*, i. 87, 231-278 ; ii. 220-224.]

H. Ha.

DENIZEN. An alien who has been made a British subject by letters patent and not by the usual certificate of a secretary of state. A denizen has not the full rights of a subject. He could always hold lands by purchase or devise, but until the Naturalisation Act, 1870, he could not inherit. Even now he cannot be a privy councillor or a member of either House of Parliament, nor can he hold any office of trust, civil, naval, or military.

[*Report* of the Royal Commission on the Laws of Naturalisation and Allegiance, 1869.—*Nationality*, by Sir A. J. E. Cockburn, London, 1869.]

J. E. C. M.

DENNY, William (1847-1887), member of a well-known firm of shipbuilders at Dumbarton, on the Clyde, was not only eminent in the skilled work of his profession, and as a model "captain of industry," but full of promise as a writer on social and economical questions. His *Life* by Professor A. B. Bruce (Hodder and Stoughton, 1888) presents, *inter alia*, a multitude of valuable notes from his various letters and speeches, on such matters as the organisation of a workshop, the encouragement of invention, the uses of apprenticeship, the functions of the board of trade, the character of working men, and the prospects of the labouring classes. He had a strong dislike of "absentee employers," and, having served as apprentice himself, had knowledge of the whole situation such as few other employers could possess. From a comparatively optimistic view of the relations of employer and employed and the influence of competition in industry, he passed gradually to a more critical attitude and less sanguine convictions on these subjects. In his address on "The Worth of Wages" (publ. Bennett, Dumbarton, 1876), he stated the arguments for piece-work so cogently and exhaustively that his own conversion, ten years or so later, to a different view was all the more remarkable. He had believed that the wages of piece-work are self-regulating, but he became convinced, after a larger experience, that they are not so —except in "cases where rates can be fixed and made a matter of agreement between the whole body of the men in any works and their employers"—but, on the contrary, they "are liable, under the pressure of heavy competition, to be depressed below a proper level" (Letter to Mr. John Rae in *Life*, p. 113). In reading his address on the "Industries of Scotland" delivered at Dumbarton, December 1878, with special reference to the competition of the Tyne with the Clyde in the matter of shipbuilding, we need to remember this change of opinion, though, like a good reasoner, he always so states his arguments that we can judge for ourselves. J. B.

DENOMINATIONAL CURRENCY. See Colonies : Currency in British Colonies.

DENOMINATIONS OF BANK NOTES. The denominations in which bank notes are issued appear to depend mainly, if not entirely, on custom and convenience. The chief question of policy is as to the issue of notes corresponding in denomination to coins in circulation, especially to the coin, whatever it may be, which forms the unit of the currency. It is obvious that to the extent to which such notes circulate they must displace coin. It is possible that some part of the coin thus withdrawn may be hoarded, but it is more probable that it will be made use of in some way out of the country. The notes not being exportable, it is probable that the coin will be used for the purchase of commodities from abroad, and thus the issue of such notes may lead directly to the depletion of the stock of coin. On the question of convenience the points of most importance in regard to the issue of notes of small values, are, on the one hand the convenience of portability, on the other the discomfort of a currency frequently mutilated and dirty, with the possibility of infection, and of loss or destruction. The prevalence of forgery depends largely on the denominations of the notes issued. Greater caution is shown in dealing with a £5 note than in taking one for a fifth or tenth of that sum. Besides, the chance of detecting a forgery is greatly diminished when the note is dirty or worn by use. The maintenance of a currency of small notes, having extensive use, in a clean and sightly condition, may involve an expense exceeding any profit possible to be derived from its issue, except where current rates of interest are very high and where no important stock of bullion is held to meet the notes. In addition, the expense may outweigh any economy arising from diminished abrasion of the coin. The actual loss from abrasion of the English sovereign is about one-tenth of a penny per annum, while the cost of printing a note has never been estimated below one penny, and has been found in practice to be frequently double that sum (see Abrasion). The following table gives the lowest denominations of notes issued in some of the principal countries of the world, though not now in all cases in active use.

			£	s.	d
Italy	50 centesimi	= about	0	0	5
Austro-Hungary	1 florin	= ,,	0	1	8
France	5 francs	= ,,	0	4	0
United States	1 dollar	= ,,	0	4	2
Germany	5 marks	= ,,	0	5	0
Norway	5 kronor	= ,,	0	5	7
Sweden	5 rixdalers	= ,,	0	5	7
British India	5 rupees	= ,,	0	6	8
Belgium	20 francs	= ,,	0	16	0
Holland	10 florins	= ,,	0	16	8
Scotland and Ireland	1 pound	= ,,	1	0	0
England and Wales	5 pounds	= ,,	5	0	0

It does not appear from these figures that the denominations of bank notes are dependent on or indicative of the poverty or wealth of a

country. But some closer connection in this respect may be found in the extent to which the smaller denominations preponderate, though other local circumstances may have a share in determining this matter. We may contrast the note circulation of France and Belgium in 1913.

France.			*Belgium.*		
Francs.	Amount per cent.	Number per cent.	Francs.	Amount per cent.	Number per cent.
5 (4s.)	·4	·4	20 (16/-)	23	64
20 (16s.)			50 (£2)	11	12·5
25 (£1)			100 (4)	40	22
50 (2)	16	36·5	500 (20)	5	·5
100 (4)	52	59	1000 (40)	21	1
500 (20)	5	1·1		100	100
1000 (40)	26·6	3			
	100	100			

R. W. B.

DENOMINATOR, Common. The term "common denominator" is applied by Jevons to the function of money which he thus describes: "In a state of barter the price-current list would be a most complicated document, for each commodity would have to be quoted in terms of every other commodity. . . . Between 100 articles there must exist no less than 4950 possible ratios of exchange. . . . All such trouble is avoided if any one commodity be chosen, and its ratio of exchange with each other commodity be quoted. The chosen commodity becomes *a common denominator or common measure of value*" (*Money*, p. 5). Jevons here uses "denominator" as equivalent to measure of value—the term which he more frequently employs.

According to Prof. Walker a distinction should be drawn between denominator and measure of value. "Curiously-coloured bits of paper with a government stamp upon them, which it is felony to imitate," and without "intrinsic value," may serve the purpose of a common denominator, but not that of a common measure of value (Walker, *Money*, pp. 9, 280-288). (See Standard of Value.) F. Y. E.

DEODAND. Any personal chattel which was found to have been the immediate cause of the death of any reasonable creature, was anciently forfeited to the crown, to be given to God, as by distribution in alms to the poor. It seems to have been originally intended as an expiation for the souls of such as were snatched away by sudden death, just as the apparel of a stranger found dead went to purchase masses for his soul (Thorpe, *Anglo-Saxon Laws and Institutes*). This may account for the rule of law that no deodand was due when an infant under the age of discretion was killed by a fall from a cart or horse, or the like, not in motion; whereas if an adult person were so killed the thing was forfeited. If, however, the horse, cart or other thing in motion killed an infant it was deodand, as the misfortune was then partly owing to the negligence of the owner, who was thus rightly punished. If a thing not in motion were the occasion of a man's death only that part which was the immediate instrument was forfeited; but if it were in motion all that went to make the wound more dangerous was forfeited. Thus if a man, climbing up the wheel of a cart, fell and was killed, only the wheel was deodand; but if the wheel ran over his body, not only the wheel but the whole cart and load was deodand. It mattered not whether the owner of the thing was concerned in the killing or not, for if a man were killed with a sword the sword was deodand although not belonging to the man who used it. For this reason we find in old indictments for homicide the instrument of death and its value presented by the grand jury to enable the king to claim the deodand. Deodands were not due for accidents happening on the high seas out of the jurisdiction of the common law, neither did any deodand accrue in the case of felonious killing, but cases occur in which ships were valued for deodand by reason of accidents at sea. A Latin phrase attributed to Bracton has, by mistranslation, given rise to erroneous statements as to what constituted a deodand. "Omnia quæ ad mortem movent," evidently meaning all things which tend to produce death, has been rendered "move to death"; thus giving rise to the theory that things in motion only were to be forfeited. Deodands were finally abolished altogether by statute 9 & 10 Vict. c. 62. H. Ha.

DEPARCIEUX (or De Parcieux), Antoine (1703-1768), born near Nismes, raised himself from the rank of a peasant by his mathematical ability, which was at first exerted in the construction of sun-dials. A tranquil life devoted to science — applied mathematics chiefly — terminated at Paris, 1768.

Deparcieux's contributions to vital statistics give him a place in this dictionary. He constructed life-tables based upon two sets of observations, relating respectively to persons who had taken part in the French Tontines (*q.v.*), and to the inhabitants of religious houses—monks and nuns. It appeared that the religious celibates had the advantage in respect of longevity at the earlier, but not at the later periods of life. It also appeared that the *expectation of life* at every age was greater for nuns than for monks. Deparcieux seems to have been the first to define expectation of life (which he termed *vie moyenne*), and to construct separate life-tables for males and females. Deparcieux's treatment of statistics commands the suffrage both of the mathematician and the general reader. "I do not see how he could have made a better use of his data," says the specialist Milne; while the lively Voltaire is believed to have taken Deparcieux as the model of "the geometer" who discourses so instructively in *L'homme aux quarante écus*.

Deparcieux is sometimes called *the elder*, to distinguish him from his nephew, Deparcieux the younger, who wrote on the same class of subjects as his uncle, but with less effect.

Essai sur les probabilités de la durée de la vie humaine (1746).—*Reponse aux objections . . .* (1746).—*Addition à l'essai . . .* (1760).—These works are in the library of the British Museum, entered in the catalogue under the head, Parcieux. The *Reponse* is bound up with the *Addition*. De Moivre, *Doctrine of Chances*, 3rd ed. (1756), penultimate page.

[Histoire de l'Académie Royale, Année 1768, p. 155.—*Éloge de M. De Parcieux.*—Richard Price, *Observations on Reversionary Payments*, 4th ed. (1783), vol. ii. p. 189.—Maseres, *Principles of Life Annuities* (1783), Preface.—Tetens, *Einleitung zur Berechnung der Leibrenten* (1785), p. 79.—F. Baily, *Doctrine of Life Annuities*, p. 13.—Milne, *Valuation of Annuities* (1815), vol. ii. p. 555, and p. 574.—*Assurance Magazine*, vol. ii. p. 205, and vol. xv. p. 175.—Farr, *Vital Statistics*, p. 439.—Deparcieux's celebrated tables are given in some of the passages above referred to. Other references, and a version of the tables, will be found in the article on Deparcieux in Walford's *Insurance Cyclopædia*.] F. Y. E.

DE PARIEU. See Parieu, Esquirol de.

DEPARTMENT. A separate branch or division of the public administration.

The varying character and the great extent of the administrative functions of the state necessarily require for their efficient discharge a similar division of labour and concentration of specialised knowledge and skill to that which is arranged in any well-organised industrial undertaking. It is not too much to say that without the most elaborate division and subdivision of official duties, and their concentration within appropriate areas, executive government would be impossible. In addition to the advantages which ordinarily follow the specialisation of function, an *esprit de corps*, or desire to look with a single eye to the efficiency of a particular department, is fostered amongst the more responsible members of its staff. Such a result is of the greatest possible value to the public at large, although it is probable that in our own country it has been gained at the expense of the necessary "integration," and that too little regard has been paid to the necessity for that "intimacy and firmness of the connections between the separate parts" upon which the well-being of organisms, physical, industrial, or social, must depend. In the desire to avoid increase of expenditure, or the undertaking of duties not quite in line with its own special functions, a department will at times be unwilling to perform services which would be of advantage to the community, and apart from the cabinet or the treasury—the one too much pressed with business of the first importance, the other looking at all questions mainly from the financial side—no means of rectifying the separatist tendency exists.

As may be supposed from the varying requirements of the public service, the actual division of the administration into departments varies from time to time. Some of them, as in the case of the treasury, the privy council office, the home office, and the foreign office, are of old standing, whilst others, as the office of the secretary for Scotland and the board of agriculture and fisheries, have been more recently constituted. A reference to the particulars given in the annual estimates for civil services will afford interesting evidence of the extension of the functions of government in this country in a comparatively recent period.

The statement as to the "accounting departments and services" prefixed to the estimates shows that, leaving out of account the war office, the admiralty, and the three revenue departments—customs, inland revenue, and post office—the main divisions of the public service were sixty-five in number, of which nine were exclusively Scotch and seventeen Irish. Some of these may be said to exist for the control and service of the remainder, *e.g.* the treasury, office of works, civil service commission, exchequer and audit department, and the stationery office. The amount voted to be accounted for by these departments for the year 1909-10, and by some of the other principal departments, is shown in the following table:

Accounting Department.	Amount voted for 1909-10.
Treasury (16 votes, including Old Age Pensions)	£10,301,050
Office of Works (12 votes)	2,089,676
Board of Public Works, Ireland (3 votes)	363,504
Civil Service Commission	38,403
Exchequer and Audit Department	64,400
Stationery Office	762,960
Treasury Solicitor	99,897
Treasury Remembrancer in Ireland (for County Court Officers, Ireland)	110,875
Home Office (3 votes)	538,250
Foreign Office (2 votes)	667,877
Colonial Office (3 votes)	1,342,421
Board of Trade (4 votes)	527,220
Secretary for Scotland	36,016
Chief Secretary, Ireland (8 votes)	459,574
Paymaster-General (for Superannuations, etc.)	691,139
Paymaster of the Supreme Court (2 votes)	366,825
King's and Lord Treasurer's Remembrancer (3 votes)	129,668
Accountant-General of the Supreme Court, Ireland	104,919
Board of Agriculture and Fisheries	173,169
Department of Agriculture, etc., Ireland	267,501
Ordnance Survey	200,076
Local Government Board	254,294
Registrar-General's Office	44,315
Local Government Board, Ireland	77,731
Prisons Department (England and the Colonies)	753,737
Prisons Department (Scotland)	97,390
" " (Ireland)	112,695
Land Commission, Ireland	303,677
Dublin Metropolitan Police	96,963
Constabulary, Ireland	1,380,918
Education Department (England and Wales)	13,648,792
British Museum	179,228
Public Education (Scotland)	2,147,541
" " (Ireland)	1,621,921
Sundry other Departments	695,521
Total	£40,750,143

[The estimates for Civil Services, 1892-93 (P.P. No. 48 of 1892) may be referred to. See also BUREAUCRACY.] T. H. F.

DEPARTMENT (FRANCE). A term applied to the principal territorial and administrative area existing in France. The division of that country into departments was first effected by the decree of the 22nd December 1789, the arrangement being embodied in Art. I. of the Constitution of 1791. There are at the present time eighty-six departments, or eighty-seven if the "territory of Belfort," the remnant of one of the departments ceded to Germany in 1871, be regarded as a separate department. Since 1889, the three departments of Algeria have also been treated, for most purposes, as part of France proper. The area of a department ranges from 184 square miles in the case of the Seine to 3597 square miles in the case of the Landes, the average being about 2300 square miles, or more than one-third the area of Wales. A department is administered by a prefect appointed by and representative of the central authority. He is assisted by a *conseil général*, elected by universal suffrage, and a council of prefecture, nominated by the central authority, for the purpose of deciding legal questions and advising the prefect when asked to do so. Each department is divided into "arrondissements," these again into "cantons," and the "cantons" into "communes."

[See Block's *Dictionnaire de l'administration française*, and *Dictionnaire Général de la Politique*.—"Local Government in France," by M. Waddington, *Nineteenth Century*, July 1888.] T. H. E.

DEPOPULATION (TERM). The laying waste, destroying, and unpeopling of a place (Co. 12 Rep. p. 30), stated to be "now the apparent effect of enclosing lordships and manors, whereby several good old villages have been reduced from a great number of sufficient farms to a few cottages," by Cowel (*Interpreter*, ed. 1637), in whose time an extensive inquiry into the depopulation of the rural districts was carried out. The same writer states that *Depopulatores agrorum* "were so called because, by prostrating and ruining houses, they seemed to depopulate towns"; and *depopulatio agrorum* was a great offence at common law for which benefit of clergy was denied. The pulling down of farm-houses and conversion of arable into pasture was checked by 4 Henry VII., and other well-known acts throughout the Tudor period (Cunningham, I. 468). Depopulation might also ensue from excessive taxation or purveyance (*Dialogus*, i. 8). The unit of prosperity in the earlier and later inquisitions alike was the plough itself—the extent of depopulation being ascertained by the reduced number of ploughs in each village. H. Ha.

DEPOPULATION, IN RELATION TO ECONOMIC HISTORY, has hitherto been chiefly considered as a remarkable but disconnected phenomenon. Thus, while it is usual to dilate upon the alarming proportions of this social movement at several distinct periods of our history, it has not always occurred to the general historian to regard it as a visitation, possible under the political environments of every age.

The truth is that the same causes—the visitation of God and the inhumanity of man—have not infrequently operated to produce the same results throughout successive centuries. At uncertain, though constantly recurring intervals, this social scourge has hindered the fairest prospects of industrial progress. Though in recent years less known as a factor in economic life, in earlier days depopulation saddened the reigns of powerful monarchs—causing alike the exultation of foreign enemies or trade rivals and the lament of successive generations of social reformers.

The depopulation of Saxon and Norman England was rather general than local, and of historical rather than economic interest, except for the insight that is afforded by it into the industrial resources of the country. The recurring pestilences and famines, and the partial invasions of the next three centuries left an equally indelible mark upon the page of history; but it is with individual enterprise and the public policy which governed its ceaseless workings from the 14th to the 17th century that we are especially concerned.

The "peace of the plough" is perhaps a fanciful term applied to a very real force in the national polity. It denotes a predominant interest in the pursuit of agriculture, as forming the very basis of the industrial life of the nation. Herein its chief wealth was invested, hereby its entire finances were adjusted, and the ploughshare and the reaping-hook continued to be idealised as the symbols of native industry for centuries after they had been practically replaced by the shepherd's crook and the weaver's shuttle. Therefore, from Saxon times onwards we find the peace of the plough preserved by a succession of remedial measures intended to foster a frequently declining industry.

It is to be remembered that down to the close of the 13th century not only the main resources of the country but the chief part of the royal revenue were derived from this source. This is the period of the great prædial surveys, and of agricultural treatises; the period of CARUCAGE and SCUTAGE (*q.v.*), and of royal commissions of inquiry into the grievances of the rural community. The *Dialogus de Scaccario* alludes to one of these inquisitions in the well-known story of the king on his progress being waylaid by husbandmen bearing their idle ploughshares aloft "as a symbol of agricultural depression." A few original fragments of another inquisition of the 12th century have survived, which almost anticipate the complaints of the English peasant insurgents of the

16th century. The Saxon Chronicle gives ample instances of agricultural distress and depopulation over a wide period, but it is not till we reach the middle of the 14th century that the evil assumes the characteristic type which so long prevailed. Before the reign of Edward III. the interest of the crown in the distribution of wealth had undergone a change. The sheriff's farms no longer enabled the king "to live of his own"; great escheats brought with them greater waste; the last desperate attempt to exact the full feudal liabilities of the military tenants by new-fangled inquisitions, Nevill's taxation—as odious and as fruitless as Noy's ship-money—had failed. The crown, therefore, was compelled to drift with the flowing tide. It spread its nets there and drew in an ample revenue from customs and subsidies and farms of the Lombard and Flemish publicans in place of feudal levies and the plunder of the Jewish mortgagees. The staple articles of the export trade of England became wool and fells, and leather and fats. Corn was henceforth exported only under the sliding scale. Then followed the plague, and in its wake inclosures and convertible husbandry. Then the prædial insurrection, and the industrial revolution had begun.

From the close of the 14th to the beginning of the 17th century we can trace the depopulation of the English rural districts in the complaints and remonstrances of the oppressed, backed by a long string of useless remedial measures, not wholly inspired as might be supposed by the goodwill of visionary churchmen, benevolent despots, and alarmist legislators, but by the far-seeing policy of the great ministers of the crown, the obvious meaning of which is apparent in most of the economic tracts of the 16th century as a preparation for the deadly struggle between the landed and the moneyed interests.

In one aspect the Statute of Labourers itself was devised for the encouragement of tillage. It was so expressed in its later editions, and almost simultaneously the act of depopulating is mentioned as a felony. All through the 15th century the evil grew while the feudal system dwindled. The feudal surveys of Henry VI. are an instructive commentary upon the *Testa de Nevill* on the one hand and the Statute of Fines on the other. It was in the reign of Henry VII. that the suffering consequent on inclosures was first brought prominently forward in a well-known statute. This, however, and the similar measures of the next four reigns seem to have given no real relief to the congested districts. Even the partial migration of labour to the towns was insufficient to cope with this distress. The real solution was the increased employment of labour made possible by the success of convertible husbandry.

There are many valuable materials extant to enable us to estimate both the causes and the extent of this depopulation in the 16th century, but few perhaps as complete as the curious returns made in the year 1517 (*Lansd. MSS.*, i. 60) and the still more extensive returns made in pursuance of letters-patent dated 20th August 1608, which have hitherto been little known (*Chancery Records, Petty Bag, Depopulations*).

This latter instrument recites that the crown being given to understand that there are in many parts of England, and notably in the county of Bedford, "many houses pulled downe, lett to decay, standinge voide and uninhabited, or the ground that of former tymes belonged to dwellinge-houses dismembered and taken from them and greate quantities of ground heretofore used for arrable converted to pasture, by which and by many other sinyster and corrupt practises and devises our Realme is in many partes wasted and depopulated to the grievance of our people the damage of our estate and against the ancient common lawes and statutes of our Realme, and which we are determined to remeadie and redresse," the lord-lieutenants and certain knights and esquires of several of the home counties, to which this inquisition seems to have been confined, are hereby empowered to inquire by a sworn jury and examination of witnesses as to the facts alleged in the schedule.

The articles of the inquiry are to the following effect:—(1) How many towns, villages, churches, hamlets, boroughs, parishes, dwelling-houses, farms or farmhouses, families, ploughs, or tenancies in the county of *Bedford* have since the twenty-fourth year of Elizabeth been depopulated, and by whose fault and by what means; and the population maintained before and after such depopulation; (2) what grounds have been converted from tillage into pasture; (3) what lands have been severed from the farm-buildings; (4) what farm buildings have been pulled down; (5) who hold more than one farm; (6) who have evicted their tenants; (7) what inclosures have been made.

The returns to this inquiry, which were ordered to be made into the Chancery before the October following, give us a complete picture of the agrarian revolution during a given period within a given district. They are as complete in their way as the Hundred Rolls of the 13th century, and they may be regarded as the summary of the agrarian question before it disappeared from public view for another two centuries. It was upon the evidence of this commission that the lawyers of the 17th century based their definitions of depopulation, and it is in this connection that it has descended to us as an economic term.

[Cunningham, vol. ii. Appendix.—The *Inquisition* of 1517, edited by I. S. Leadam.—*Transactions of R. Hist. Soc.* (N.S.) vol. vi. pp. 167-314.]

H. Ha.

DEPOPULATION (Causes). The term depopulation is now used in a sense very different from that originally assigned to it. Such a true

depopulation, or stripping a country of its inhabitants, as has occurred in the past in Mesopotamia, Syria, and parts of central Asia, is scarcely known in these days, but the term depopulation is now applied to the case of any country, or part of a country, in which the population as measured from time to time is found to be diminishing.

The causes of depopulation are numerous; for convenience they may be grouped under three headings, *physical*, *political*, and *economic*, but usually several causes contribute to the result.

A. Physical Causes.—(1) *Volcanic eruptions*, within the usually restricted limits of their action, produce more considerable effects than might be supposed, both in direct destruction of life and in rendering large tracts of country incapable of cultivation. Among the more notable outbursts of volcanic force which have thus caused depopulation may be mentioned the eruptions of Vesuvius in 79 A.D. and again in 1822; of Etna in 1669, which destroyed fourteen villages; of Papandayang in Java in 1772, which is said to have buried 40 villages with 3000 persons; of Galungung, also in Java, in 1822, which killed 4000 people; of the Volcan de Agua in Guatemala in 1541; of Skaptar Jökull in 1783, which destroyed one-sixth of the inhabitants and one-half of the live stock of Iceland, and rendered great part of the island permanently sterile; of the "king of volcanoes," Mauna Loa, in Hawaii, in the years 1855, 1868, and 1881; of the oil wells at Baku in 1887; and of Tomboro, in the island of Sumbawa in 1815, said to have destroyed 12,000 people. Again in 1883 one of the most remarkable outbursts of which we have records occurred in Krakatoa, causing a loss of life estimated at the time to amount to 75,000; while lastly, Tarawera in 1886 covered a large tract of the north island (New Zealand) with mud and ashes. (See, for volcanic phenomena generally, Humboldt's *Cosmos*).

(2) *Floods.*—The Ho-ang Ho affords the most striking instances,—in 1851-53 it changed its course and buried whole villages in mud; in 1888, breaking down its banks once more, it gave rise to an appalling catastrophe, overwhelming it is said at least one million of people and causing subsequently widespread famine.

(3) *Changes of climate*, more especially drought, due to the neglect of irrigation works, or the destruction of forests, may cause the land to be incapable of sustaining as large a population as formerly. The condition of Mesopotamia since its conquest by the Turks in 1515 is a conspicuous example of the former, North China of the latter, case. Mr. J. A. Baines, census commissioner of India, says (*Times of India*, 18th April 1891) that the census proved that a local malarial fever had caused considerable emigration from Rajshahye and Nuddea in Bengal.

(4) *Pestilence* was formerly in Europe, as it is still in Asia, both a potent and a frequent cause of depopulation (see Black Death). In modern times the epidemics of cholera in 1849, 1853, 1854, 1857, and 1866, of smallpox in 1871, and of influenza in 1890, 1891, and 1892 decidedly checked the natural increase of the population in several countries of Europe (see *Statistical Chronology of Plagues and Pestilence as affecting Human Life, etc.*, by C. Walford, 1884).

(5) *Famines* resulting from failure of crops due to exceptional seasons or plagues of locusts, or to great disasters such as the bursting of their banks by rivers, have often been greatly aggravated by pestilence or war; in fact, these three causes are frequently inseparably bound together. The most notable instance in recent times of famine causing considerable depopulation in Europe occurred in Ireland in 1847, but in India famines still from time to time greatly check the growth of population. Great famines occurred in 1770, 1781-83, 1790-92, and even so recently as 1860-61 half a million of people perished from famine in North-West India, while in 1865-66 it is believed that one and a half million perished in Orissa. However, in 1874 and 1876 the efforts of the Government were so far effectual as to prevent any great loss of life except in a few districts. Mr. Baines (*Times of India*, 18th April 1891) says that the famine tracts of Madras, which showed considerable depletion in 1881, filled up rapidly by 1891 owing to the return of emigrants or to actual immigration from other districts. There was an awful famine in North China in 1877-78 in which millions are reported to have perished (see *Famines of the World*, etc., by C. Walford, *Journal of the Statistical Society*, vol. xli. 433, vol. xlii. 79).

B. Political Causes.—(6) *War*, involving as it once did the massacre of women and children, and the carrying off of whole nations into slavery, has been a most powerful cause of depopulation, especially in Asia and Africa. The extinction of aboriginal races in recent times has often been a result of increasing population, the stronger race displacing the weaker, but the conquests of such nations of warriors as the Matabele have caused great diminution of more civilised races like the Mashonas. Modern wars are comparatively short in duration, while owing to sanitary precautions pestilences do not so often follow in their train. Thus it has been said that the war between Prussia and Austria in 1866 was the first in which more men were killed in action than died of sickness. In France in 1854 and 1855 the deaths exceeded the births by 69,318 and 35,606 respectively, and in Austria in 1866 by 57,831; in both this result was the combined effect of cholera and war. In France again in 1870 and 1871 there was an

excess of deaths over births of 103,394 and 444,889 respectively, a disastrous result of the war, the commune, and an epidemic of small-pox.

(7) *Actual deportation of the people*, as in the familiar instances of the Jews in the Babylonian captivity, the Jews expelled from Spain (1492), and the Moors also from that country (1609). This heading connects itself with the next one to be considered.

(8) *Religious persecution* drove the Huguenots from France, the Pilgrim Fathers from England, and is now driving the Jews from Russia, to the great economic disadvantage of the persecuting country in each case.

(9) *Bad government* is not perhaps directly a great cause of depopulation, but indirectly it assists. Restrictions on trade, oppressive taxation, bad land laws, capricious interference with the liberty of the subject, as well as social and political agitation, all discourage the growth of population; but of all acts of government probably compulsory military service has most effect in stimulating emigration.

C. Economic Causes.—Though the action of these is often not so obvious as in the case of natural and political causes, and is often difficult to unravel satisfactorily, yet they are really far more powerful than all the other causes put together.

(10) *The repeal of the Poor Law.*—The old law of settlement in England was intended to prevent men from leaving their native parishes; it was a protective measure which tended to keep up artificially the number of the rural population; its repeal naturally facilitated migration and to that extent contributed to local depopulation. The same is true of the abolition of out-door relief to able-bodied men. The poor law has, however, in some cases produced the same result in an opposite way: *i.e.* some landlords, to prevent the poor from becoming chargeable upon the land, cleared their estates of cottages and so caused a veritable depopulation within a limited area.

(11) *The formation of deer forests.*—Some Scotch landowners, finding they could obtain better rents by devoting their land to sporting purposes, have followed the classical example of William the Conqueror, and removed all agricultural tenants with a view to making deer forests. Naturally this has taken place only in those parts of the Highlands where the land was poor and ill adapted to agriculture. To some extent the inhabitants have found compensating employment in meeting the personal wants of the sportsmen. The real objection to such afforesting seems rather to be to its selfish character than to the withdrawal of a small quantity of land from cultivation.

A return to the House of Commons dated 4th August 1891 gives certain "particulars of all deer forests and lands exclusively devoted to sport in Scotland." From this we learn that the total amount of such lands was in 1883 no less than 2,292,153 acres, and that 274,980 acres have been afforested since, the recent additions being in the counties of Argyll, Inverness, Ross and Cromarty, and Sutherland. The number of persons displaced is not given, but there are various indications that at any rate the greater part of the land devoted to sport can be of but slight agricultural value, thus:—(1) Two-thirds of the estates comprised land having an altitude exceeding 2500 feet above the sea, while in only four estates was the highest land under 1000 feet. (2) In about half the estates the rent before and after afforestation is given; in the very great majority of cases the sporting rent is greater than the old rents, often several times as great, in only three cases is the new rent 25 per cent below the old. (3) The rent before afforestation averaged in more than one-fourth of the acreage for which the facts are available from *nil* to under 2½d. an acre; in nearly half the acreage between 3d. and 8d., and in less than one-fourth between 9d. and 1s. 8d., the last being the highest rent recorded. Land commanding such average rents could sustain but a trifling pastoral or agricultural population.

(12) *The repeal of the corn laws*, by bringing down the artificial price of wheat, caused the tillage of land ill adapted for the growth of cereals to be no longer profitable; hence some lands either went out of cultivation altogether or were devoted to pasturage, in either case there was less employment for labour on the farms affected.

(13) *The application of machinery to agriculture* enables the same amount of land to be cultivated by the labour of a smaller number of men. The cause has operated widely in different parts of the world.

(14) *The centralisation of manufactures*, due to the adoption of the factory system, has caused the decay of village industries such as hand-loom weaving, and has lessened the importance of the village craftsmen.

(15) *The direct attraction of large towns*, not merely as offering higher wages to labour, but as affording more interests, more amusements, in short, more "life," is a potent factor in promoting depopulation in rural districts.

(16) *Improved education and a cheap press* make men more ambitious and more restless, while by familiarising them with new ideas they make them less fearful of change. Moreover in rural districts compulsory education tends to prevent children from being early apprenticed to the soil, and learning the manifold duties connected with agricultural labour.

(17) *The rise in the standard of living* is a very potent and widespread cause of migration, and hence of rural depopulation. Men are no

longer content to live under the old conditions which satisfied the few wants of their grandparents; they want better food, better clothes, better houses, and shorter hours of labour; to obtain these things they must earn better wages; hence they are stimulated to leave their homes in search of more remunerative employment than their native villages afford. This cause has no doubt been largely operative in keeping up the great stream of emigration from Ireland, a stream which commenced to flow long before the potato famine brought it into notoriety.

(18) *Improved communications*, railways and steamships, co-operate powerfully with many of the above causes to accelerate the depopulation of the rural districts; they bring corn from distant countries where it can be grown more cheaply, and so bring down prices; conversely they make more fertile soils readily accessible to settlers; they bring manufactured articles to remote country places and so injure village industries; they facilitate the removal of labourers to factories and mines; they even, as in the case of Cornwall, transport miners to richer and more easily worked lodes in distant lands; in a few cases they lead to local depopulation by diverting old lines of traffic.

(19) *Improvements in large towns* lead to the depopulation of their central areas, dwelling houses are turned into places of business or removed to make room for public buildings, while large clearances are made for railways and new streets. This has long been an obvious fact in London, but a like movement is also in progress not only in such towns as Manchester, Liverpool, and Birmingham, but even, as shown by the last census, in Sydney and in Adelaide; no doubt the same is true of most large towns throughout the world.

(20) *An abnormal age and sex constitution of the population*, the result of war or emigration, lowers the marriage rate and consequently the rate of natural increase. In England there is a marked excess of women, in many of her colonies an even more marked deficiency; in Ireland and in many rural districts of England there is a great excess of old people.

(21) *Deferred marriage and the artificial limitation of children* both contribute to depopulation by lowering the rate of natural increase. The first is a powerful cause in the upper and middle classes in England, the second is a still more powerful cause in France, and is said to be in some portions of the United States. To what extent families are thus restricted in England is uncertain, but the practice has many able advocates and the subject is now widely and openly discussed in a manner that would not have been believed to be possible a few years ago. In France the peculiar land system which compels the division of real estate equally among the children tends to make small families specially desired.

The economic question arises whether protection, in whatever form applied, can succeed in achieving the result aimed at. In the case of France, which restricts its birth-rate to such a degree that it increases more slowly than any other nation, does France produce as many labourers as she requires? If so, why are there more foreigners in France than in any other country? Does she have to import Belgians, Swiss, and Italians because she has not enough Frenchmen for her needs? The foreign born in France increased from 380,831, or 1·1 per cent of the population, in 1851, to 1,126,531, or 2·9 per cent of the population, in 1886, numbers and proportions not approached in any other country of Europe. Between the censuses of 1872 and 1886 the increase in the population of France was 2,116,082, of which 385,863 persons, or 18 per cent, were foreign born. The census of 1891 showed a diminution of the number of foreigners by 13,416, probably the effect of the alien law of 1888. In 1911 the foreigners were over 2·7 per cent of the population.

Rural Depopulation in England and Wales.—The division of a population into urban and rural is a matter of considerable difficulty, and strict comparisons at successive periods are scarcely practicable. In the *Census of England and Wales 1881* it is shown that whereas "the town population, *i.e.* inhabitants of the districts and sub-districts which include the chief towns," increased in the census intervals since 1851 by 19·41, 18·09, and 19·63 per cent respectively, "the country population, *i.e.* the inhabitants of the smaller towns and the country parishes," increased by 4·12, 7·32, and 7·42 per cent. The *Preliminary Report of the Census of England and Wales 1891* shows that in the ten years 1881-91 the "urban sanitary districts" increased by 15·3 per cent, the "rural sanitary districts" by only 3·4 per cent. A similar increase for both urban and rural districts is recorded for the decade 1891-1901. Our rural population increased, but so slowly as to be almost stationary. But the census of 1911 shows an improvement, an important factor being the diminished loss of the rural districts by migration.

Dr. A. L. Bowley in a paper read before the Statistical Society, *Rural Populations in England and Wales* (see *Journal*, 1914), discusses rural population "from consideration of its density" as being more satisfactory than definitions based on occupations or "on the administrative distinction between urban and rural districts," which latter he regards as misleading, since, as he points out, the population of many rural districts may be raised by the inclusion of an industrial, mining, or suburban population. The method of selection has been to include all districts in which the density (1911) was not over 30 per 100 acres, and such districts in which it was 30 to 50 per 100 acres where it could be ascertained that there were no mines,

factories, industries, no residential district for persons working in large towns, no disturbing causes such as military camps, large schools, asylums, temporary works on railways, etc. An examination of Dr. Bowley's tables shows that out of 53 administrative counties the strictly rural population had decreased in 33 since 1891; of these, 9, Cornwall, Hereford, Westmoreland, Denbigh, Anglesey, Merioneth, Cards, Montgomery, Pembroke, lost continuously; 4, Northants, Cumberland, Radnor, Carmarthen, dropped in 1901 and have not altered since; 16, Devon, Somerset, Dorset, Wilts, Berks, Bucks, Norfolk, Suffolk, Cambridge, Lincs, Beds, Oxford, Gloucester, Shropshire, E. and N. Ridings of Yorks, dropped in 1901 and rose slightly in 1911; 4 remained stationary, Hunts and Northumberland throughout the period, Rutland and Brecknock dropped and rose again. Of the 20 counties in which the rural districts have improved, 6 improved continuously, Hants (with I. of Wight), Surrey, Staffs, W. Riding of Yorks, Lancs, Flint; 9, Kent, Herts, Essex, Monmouth, Worcester, Warwick, Derby, Notts, Cheshire, though higher in 1911 than in 1891, had dropped in 1901; 3, Sussex, Leicester, Glamorgan, were stationary in 1901 and rose in 1911. Durham rose in 1901 and has not altered since. Carnarvon rose in 1901 and dropped slightly in 1911.

Counties.	Population. Mining, Industrial, Suburban Areas deducted. 000 omitted.			Density: Persons per 100 Acres.	Percentage Growth.		
	1891.	1901.	1911.	1911.	1891-1901.[3]	1901-1911.	1891-1911.[3]
Cornwall	154	149	145	*19*	– 3·2	– 2.6	– 5·8
S. Western[1]	688	642	648	*17*	– 6·7	+ 1	– 5·8
Hants[1]	155	159	176	*21*	+ 2·6	+11·1	+11·4
Surrey	53	59	67	*32*	+11·3	+14	+26·4
Home Counties[2]	623	609	639	*24*	– 2·2	+ 6	+ 2·6
Eastern	1002	959	988	*19*	– 4	+ 3	– 1
S. Midland	522	492	503	*21*	– 5·7	+ 2	– 3·6
Western	240	234	237	*14*	– 2·5	+ 1·3	– 1·2
W. Midland	281	280	290	*22*	– ·3	+ 3·7	+ 3·3
N. Midland and N.W.	504	509	528	*19*	+ 1	+ 4	+ 4·8
Northern	478	463	465	*10*	– 3·1	+ ·5	– 2·7
N. Wales	176	177	177	*18*	+ ·5	0	+ ·5
Mid-Wales	157	147	145	*8*	– 6·4	– 1.5	– 7·4
S. Wales	109	105	103	*12*	– 3·7	– 2	– 5·5
Glamorgan	18	18	23	*19*	0	+28	+28

[1] Excluding Cornwall. [2] Excluding Hants and Surrey. [3] Not from Dr. Bowley's table.

The rural population of England dropped – 7 per cent in the last 50 years (see below), and only 5 out of the 14 districts considered showed an increase. Of the individual counties only 10 showed an increase in the 50 years, Hants, Surrey, Kent, Sussex, Worcester, Staffs, Cheshire, W. Riding of Yorks, Flint, Carnarvon, while Derby remained unaltered. Dr. Bowley further shows that the rural population increased 50 per cent in the period 1801-51, was stationary between 1851-71, fell 10 per cent by 1901, and recovered 3 per cent by 1911.

Increase or Decrease per cent in Registration Counties, Industrial, etc. Regions deducted, for the last 50 years.

	1861-71.	1871-81.	1881-91.	1891-1901.	1901-11.	1891-1911.[3]
Cornwall	– 3	– *13*	– 8	– 4·7	– 1·6	– 27
S. Western[1]	– 2	– 7	– 4	– 7	+ 1	– 17
Hants	+2	– *1·4*	+2	+ ·7	+ 9	+12·8
Surrey	+7	+ *4*	+9	+11	+10·9	+48
Home Counties[2]	+4	=	=	– *3*	+ *5*	+58
Eastern	– 1	– *5*	– 4	– *5*	+ 3	– 11
S. Midland	– 1	– 5	– 4·5	– *6*	+ 2	– 14
Western	+1	– *5*	– 4	– 3	+ 1	– ·9
W. Midland	+4	=	– *2*	=	+ 3·5	+ 5·7
North Midland and N.W.	– 1	+ 1	– *2*	=	+ 4	+ 1·5
Northern	– 4	– 2	– *4*	– *4*	+ 1	– 9·9
N. Wales	+2	+ 3	– 7	+ 1	=	– 1·3
Mid-Wales	=	– 4	– *8*	– 6	– 2	– 19
S. Wales	– 5	– 2	– 2	– *8*	+ 4	– 13
Rural England	=	– 3·5	– 2·9	– 3·7	+ 2·9	– 7

[1] Excluding Cornwall. [2] Excluding Hants and Surrey. [3] Not from Dr. Bowley's table.

He next investigates land occupations, and points out that the variations in rural population are not parallel with those of persons engaged in agriculture. These showed a decrease from 1861 to 1901, but a slight increase in 1911.

Rural Depopulation in Scotland.—Although the population of Scotland has increased in every decade since 1801, the phenomenon of so-called depopulation has been exhibited in certain areas. Three counties, Perth, Kinross, and Argyll, reached their maximum in 1831 (Perth and Kinross are now slightly rising); one, Inverness, in 1841; five, Sutherland, Ross and Cromarty, Dumfries, Kirkcudbright, and Wigtown, in 1851 (Ross and Cromarty and Dumfries are rising slightly); five, Shetland, Orkney, Caithness, Berwick, Roxburgh, in 1861; two, Elgin and Nairn, in 1881 (Nairn improved slightly in 1911); two, Banff and Selkirk, in 1891 (Selkirk improved slightly in 1911). In Shetland, Orkney, Caithness, Sutherland, Berwick, and Wigtown the loss has been continuous. Forfar, Clackmannan, and Bute, which had steadily progressed since 1801, dropped in 1911. On the other hand an increase has been steadily maintained at each census in Aberdeen, Fife, Stirling, Dumbarton, Renfrew (a slight exception in 1901), Ayr, Lanark, Linlithgow, and Edinburgh; these counties contain some of the largest towns in Scotland. Eighteen declining counties had a collective population numbering nearly 130,000 less than the sum of their several maxima. Argyll has lost over 30,000, Inverness 10,500. The percentage decline was nearly 30 in Argyll, nearly 26 in Wigtown, nearly 22 in Sutherland, 17 in Caithness. Although the depopulation is most evident in the Highlands, and more especially in the extreme north and west, yet five of the lowland counties have altogether diminished by over 30,000 persons during the last fifty years. The most active cause of this is probably the attracting force of the labour markets of Glasgow and the north of England. The

diminution in the north and west may probably be attributed to a rise in the standard of living and consequent emigration, since the poor soil did not afford employment for more labourers; but no doubt the concurrent extension of sheep farming, and in a few cases the formation of deer forests, have contributed to the result. Where the barrier of the sea has tended to check the beneficial operation of migration, as in Lewis, the population has continued to increase, with the disastrous results that are too familiar.

Depopulation in Ireland.—The case of Ireland is at once so important and so instructive as to merit especial attention. A century ago Ireland was a by-word for poverty; the people had few other resources than tilling the soil, and this they did in a careless manner, demoralised as they were by long dependence almost solely upon the potato, a crop which in fair seasons gives food for forty persons by the labour of one. The Irish lived under almost the lowest standard conceivable, miserably clothed and fed and even more miserably housed, and were almost chronically on the verge of starvation. Famines occurred in 1814, 1816, 1822, and 1831. Under these distressing circumstances the population continued to increase till at the census of 1841 it numbered 8,196,597. Even at that time the pressure of population upon the means of subsistence had begun to seek relief by emigration, and the census of 1841 showed the population to be considerably less than had been anticipated (see *Census of Ireland 1841*, vol. i. p. ix.); in fact no less than 428,471 emigrants are recorded as having left Ireland for the colonies, and 104,814 for Great Britain, during the decade 1831-41. Nevertheless the population continued to increase, and is believed to have reached about 8,295,061 by the middle of the year 1845, which would give a density of 525 to the square mile. It is true that the density of the population of England and Wales in 1911 was 618 to the square mile, in Belgium (1911) 652, in large districts of Bengal from 292 to about 438; but the first-named countries have great wealth in minerals and manufactures with which to buy food from other countries, the latter has a very fertile soil and a tropical climate. The potato rot appeared in 1845 and again in 1846, the main food-supply of the people failed, and famine was inevitable. It reached its height in 1847 and was, as a direct result, accompanied by severe epidemics of typhus and relapsing fevers. It is believed that starvation and fever between them claimed from 200,000 to 300,000 victims, and when the people were again numbered in 1851 the population had shrunk to 6,574,278, or 1,622,319 less than in 1841, but 1,720,783 less than the supposed maximum of 1845. The population thus diminished by 20 per cent in six years. The greater part of this startling depopulation was due to the great exodus in 1847 and the following years, when the Irish poured into Liverpool and Glasgow and spread themselves over England and Scotland, and every ship sailing for North America was filled with Irish emigrants.

The decrease affected every county in Ireland except Dublin (it was least in Leinster, greatest in Connaught), but while this unexampled depletion of the rural districts was taking place, there was an increase in nine town districts amounting in the aggregate to 77,519. Belfast and Dublin each added some 25,000 to their numbers, and the increase amounted to 6 per cent in Cork, 10½ per cent in Limerick, 11 per cent in Dublin, and 33 per cent in Belfast. The census of 1851 showed that the extent of land under tillage increased by 2091 square miles, and the value of agricultural stock and crops was greater than any previously recorded. No fewer than 355,689 "fourth-class houses," mostly mud cabins, disappeared, houses of the first class increased by 10,084, those of the second class by 54,574. In short the depopulation was accompanied by a very notable rise in the standard of living.

Subsequent enumerations show the same thing,—a steady, though less rapid, diminution of population accompanied by a rise in the standard of living. The census of 1861 showed a loss of population of 775,311 or 11·8 per cent; that of 1871 a loss of 6·7; that of 1881, 4·4; that of 1891, 9·1; that of 1901, 5·2 per cent. The census of 1911 shows a decline of 1·7 per cent, the smallest on record; a decrease in the number of emigrants, an increase in the number of houses, general improvement in house accommodation (the mud cabins have nearly disappeared), a decrease in poverty, a decrease in the death-rate. (See Sir W. J. Thompson, "The Census of Ireland 1911," *Journ. Stat. and Social Inquiry Socy. of Ireland*, Dec. 1913.) The total diminution of the population of Ireland since 1841 amounts to 3,814,646, or 46·5 per cent, distributed as follows: Leinster, 41·5 per cent; Munster, 57 per cent; Ulster, 33·9 per cent; Connaught, 57·1 per cent. Except Dublin and Antrim, every county is smaller in 1911 in numbers than in 1841.

In the seventy years during which this great and real depopulation has been going on, the inhabitants of Galway and Leitrim had diminished by over 58 per cent; those of Kilkenny by over 65 per cent; but, on the other hand, some of the towns have largely increased. Londonderry has considerably more than doubled and Belfast more than quadrupled its population, rivalling in their rapid progress the most prosperous English towns. Dublin city increased between 1841 and 1901 by over 7 per cent, but "greater Dublin," including the suburbs, by over 24 per cent. The alteration of the city boundaries renders further comparison difficult.

Rural Depopulation in France.—It is well

known that the exceptionally low birth-rate of France involves a correspondingly small rate of natural increase; it is perhaps not as well known that depopulation of country districts is a no less striking phenomenon in France than in England; while it need scarcely be mentioned that the conditions of land tenure are as different as can well be imagined. The population of the whole country continues to increase slowly, a large proportion (about a fourth) of this increase being due to the immigration of foreigners; at the same time in sixty out of the eighty-seven departments the population of 1911 is less than that of 1886. The absolute decrease amounts to 60,000 for the fifty years (1861-1911) in Lot et Garonne, Haute-Saône, and Sarthe; it is between 70,000 and 90,000 in Gers, Lot, Eure, and Mayenne; it is no less than 83,524 in Calvados, 115,017 in Orne, and 113,086 in Manche. As a rule the densely populated departments have increased in density, while the sparsely populated have lost population. After Paris and its suburbs, in which the largest increase was to be found, the Mediterranean departments show the highest and most equally distributed growth. Next comes the industrial district in the north, and then the group surrounding the western seaport towns. These districts showed an increase of nearly 3,000,000 for the twenty-five years 1886-1911, thus leaving a decrease of over 1,600,000 spread over the remainder of the country. Ten departments in which the decrease was over 45,000 accounted for about 520,000, or nearly one-third of the deficit.

A comparison of the census of 1911 with that of 1906 continues the same story. In no less than 63 out of the 87 departments there was a decrease of population, amounting to over 378,000. The decrease was most marked in Ardèche, where it exceeded 15,000; in Allier, Haute-Loire, Manche, Somme, and Yonne, where it was over 11,000. The net increase of the whole country was 349,000, against 290,000 in 1906, 445,000 in 1901, 175,000 in 1896, and 124,045 in 1891 (the smallest recorded). The decrease in the rural population was 487,000 in 1901, 290,000 in 1906, while the urban population increased by 901,000 in 1901 and 610,000 in 1906, a probable migration from country to town of about 450,000 persons in 1901 and 320,000 in 1906.

Other European Countries.—The tendency of people to flock into cities, which has been shown to be closely related to rural depopulation, is found in most European States (see Ravenstein, *Journ. Stat. Socy.* lii. 1889, p. 241); for Germany (Rovrie de Beaucaire, *Bull. du Ministère de l'Agriculture de France*, 1886). The percentage of population living in towns rose in Prussia from 7·3 in 1816 to 30 in 1890, in Belgium from 13·5 in 1800 to 34·8 in 1890, in Austria from 4·4 to 15·8, in Norway from 3·3 to 16·7. See A. F. Weber, *Growth of Cities* (New York), 1899.

The United States.—Perhaps the last place where we should expect to meet with this phenomenon is the United States, yet it is to be found there. The census of 1900 showed that the state of Nevada had lost in twenty years 21,525 persons, or more than one-third of its population; this is attributed to the failure of the Comstock and other mines. The state more than recovered by the census of 1910. A comparison of the censuses of 1890 and 1910 shows that while every state except Iowa had increased in numbers in the twenty years, yet this was concurrent with a considerable rural depopulation in every state but Nevada, Nebraska, and Wyoming. It has been particularly acute in Vermont, New York, Ohio, Indiana, Illinois, Arizona, California, New Jersey, Pennsylvania, Michigan, Missouri, Oklahoma, Idaho, Utah, Washington, and Oregon. In the first seven of these, as well as in Maine, Maryland, Virginia, North and South Carolina, Iowa, Kentucky, Tennessee, Mississippi, and Colorado, it had set in some years before 1890, in some cases since 1860. Regarding the United States as a whole, the rural population, which was 64 per cent of the total in 1890, dropped to 54 per cent in 1910, while the actual numbers rose from 40,227,000 to 49,349,000. The urban population rose from 36 to 46 per cent of the total, the actual numbers being 22,720,000 and 42,623,000. In addition to many of the causes that have operated in Europe, the state returns show that large numbers of New England farms have been abandoned either because the soil was poor, or exhausted by an improvident system of farming, or because the farms were inconveniently situated. Thus much of the soil of New England has passed out of cultivation, the cultivators having gone into the great cities or migrated to the fertile soils of the western prairies. One thing is certain, the movement cannot be attributed to an aristocratic or exclusive land system.

Economic Results.—With regard to these we shall consider the British Isles only.

There is no doubt that the present tendency is for the rural population to be reduced to the lowest point consistent with the due cultivation of the land, and for all subsidiary industries to move into larger centres, with the well-known result that the proportion of modern civilised populations living under town conditions is a gradually increasing one. In spite of sanitary progress a population reared in a town can scarcely hope to be as hardy and vigorous as one born and bred in the country, so that some amount of racial degeneration appears inevitable.

Remedies.—All deplore the decline in our rural population, and many seek by legislative or other means to check it. Bad government may of course be improved, bad laws may be

repealed, oppressive taxation may be removed or its burthens equalised, but it is obvious that the causes of the depopulation of rural districts are too deep-seated to admit of eradication. The great fundamental economic law of supply and demand will not admit of denial. The provision of allotments for labourers, if judiciously carried out, might be very beneficial; an amendment of the land laws, especially by making public all mortgages and charges on land by a system of registration, and so facilitating and stimulating the transfer of land, would make our land system healthier. An extension of market gardening would of course *pro tanto* employ more hands; something may possibly be devised to foster the growth of village industries; more businesses may be transferred from London to small country towns, as has already been done in the printing trade; country life may be made less dull,—still the countryman will wend his way to London, Glasgow, or Belfast, to New York or Montreal, to Sydney or Melbourne. The remarkable uniformity of the growth of large towns, not only in every country of Europe, but in America and Australia, proves conclusively that it is no question of land laws that regulates the matter. Do not let us deceive ourselves by expecting that results will in this country follow land-law reforms which have not appeared in other countries where a diametrically opposite system has been established. The modern man prefers to live in an urban or suburban district; improved means of communication enable him to accomplish the object of his desires, and no effort will prevent him from doing so, or will succeed in attaching to the soil a greater number of labourers than is absolutely required to produce sufficient supplies of food under the easiest conditions attainable.

The following extracts from the *History of New South Wales from the Records*, G. B. Barton (1889), vol. i. 1783-1789 show the apprehensions once felt that the establishment of the new colonies would deplete the parent country.

Page 8.—Sir George Young sketched the prospective advantages of the settlement in the following form. . . . 4. The settlement of the country would not tend to "depopulate" the parent state, as the settlers would be principally collected from the Friendly Islands and China; the only men required from England being a few skilled workmen, who might be drawn from the ships sent out on the service.

Page 430.—Sir G. Young's proposal—

At a time when men are alarmed at every idea of emigration, I wish not to add to their fears by any attempt to depopulate the parent state; the settlers of New South Wales are principally to be collected from the Friendly Islands and China; all the people required from England are only a few that are possessed of the useful arts, and those comprised among the crews of the ships sent out on that service. G. B. L.

DEPOSIT (Sales of Land). It is usual, on the sale of land or houses, for the purchaser to deposit a sum (generally £10 per cent of the purchase-money) as soon as the bargain is concluded, which on completion is considered as a payment on account of the purchase-money, and in case of non-completion through the purchaser's default is forfeited to the vendor. When the sale takes place by auction the deposit is generally paid to the auctioneer, who holds it as stakeholder for both parties, but in the case of a private contract the deposit is usually paid to the vendor. In cases where the vendor is not entitled to receive the purchase-money, or is only entitled to a part of it (as in the case of a sale by a tenant for life under the Settled Land Act, or by a mortgagor), it is safer for the purchaser to pay the deposit to the vendor's solicitor as stakeholder, or to pay it into a bank to the joint account of his and the vendor's respective solicitors [cp. Earnest Money]. E. S.

DEPOSIT (Deposits). The term "deposits" is used in banking in a technical sense. In considering this it must be remembered that banks may be divided into three classes—banks of issue, of discount, and of deposit. In the first the banker trades with the capital of the public, in the second with his own capital, and in the third, by far the most important at the present day, with that of his customers. Although in its present development deposit banking is entirely modern, as an institution it is of ancient origin. The *Trapezitæ* of Athens received deposits at least as early as the sixth century B.C. They held money at interest, and also took deposits specially for the purpose of payment to a third party, but it is not certain that they kept running accounts. In Rome, both the Argentarii (*q.v.*) or private money lenders, and the Mensarii (*q.v.*), who were appointed by the state, received money on deposit, in addition to money-changing and money-lending. They kept two classes of accounts. On the one interest was paid, the account was then called *creditum*. On the other, called *depositum*, no interest was paid, the lodgment being for safety or for convenience of payment to a third party, upon verbal request, or written authority of the depositor, but it is not certain whether this assignment or cheque (*attributio, perscriptio*) was transferable. In the middle ages the banks of Venice and Genoa, although primarily incorporations of public creditors, also took deposits, although it does not appear whether they paid interest upon them, or lent out the moneys held. The chief function of these banks as well as those of Amsterdam and Hamburg (see Banks, Early European) was to remedy the deficiencies of the circulating medium, which consisted of coins of different countries and kinds, all more or less clipped or defaced. Owing to the difficulty of dealing with

such a currency it became the practice to deposit it in the bank, and to make transactions in bank money. These deposits could not generally be withdrawn, but might be transferred to the credit of other persons. Banks of this class did not lend out any part of their deposits, and therefore did not increase the circulating capital of the country. Out of them arose the banks of issue, dating from the 17th century, which have now, among English-speaking races at least, very largely given place to the modern banks of deposit. In these the cheque has taken the place of the bank note, and by the convenience of this instrument banking has reached a degree of development of which it had not previously been supposed capable (see BANKS and CHEQUES, LAW OF).

The term "deposit" is now used both *generally* and *specially*. *Generally*, it denotes the whole amounts lodged in a bank under whatever conditions held. *Specially*, it denotes money lodged at interest, usually in round sums, and not subject to cheque at sight, a *deposit receipt* being given against every sum paid in, which receipt must be given up on repayment. In its special application the use of the term is the reverse of that which obtained among Roman bankers as quoted above. Connected with the special use of the term is the subject of deposits in Savings Banks (see BANKS). Circulating capital deposited in these banks is not available for the daily needs of business, as their funds are invariably employed in fixed investments, but they are more useful than if hoarded. Banking deposits are frequently taken as an index of prosperity. In comparing returns of deposits held in different countries, or at different times, regard should be had to the following considerations among others. (1) The proportion of the whole banking institutions comprised in the returns under discussion. In comparisons as to time, important alterations may have taken place, so that returns at one date may show deposits previously existing but then concealed. This may be due to (*a*) greater perfection in returns, or (*b*) change in character of banking institutions, *e.g.* gradual adoption by private banks of practice of publishing accounts, or their absorption by banks already publishing. (2) Character of banking institutions. A number of single banks will show large amounts of deposits with each other, which would not appear at all in the case of a few large banks with many branches, *e.g.* some 300,000,000 of dollars (say £60,000,000 sterling) of such cross deposits are held by the national banks of the United States. (3) Peculiarities in making up balance sheets or returns, *e.g.* in the United States clearing exchanges are always made in the morning, therefore the whole clearing appears among the assets of the previous day, and the deposits are larger by a corresponding amount. Thus in returns of national banks at different selected dates we find—

	1869. mlns. $	1880. mlns. $	1890. mlns. $
Deposits	678	1280	1925
Clearing Exchanges	154	244	84
Net Deposits	524	1036	1841

In sterling, converting the $ as 5 = £1.

	1869.	1880.	1890.
Deposits	£135,600,000	£256,000,000	£385,000,000
Clearing Ex.	30,800,000	48,800,000	16,800,000
Net Deposits	£104,800,000	£207,200,000	£368,200,000

Between the first and last dates the increase in gross deposits is 184 per cent, in net deposits 251 per cent. (4) Characteristics of business in different countries, *e.g.* as between France and the United States, where totally different financial methods prevail. (5) Characteristics of banking in different countries, *e.g.* Australasian banking, where probably one-fourth of the deposits shown at the present date are drawn from the United Kingdom, and therefore should be deducted in estimating the wealth of those colonies. R. W. B.

DEPOSITION. In the wider sense deposition means the act of giving evidence in a judicial proceeding. In its narrower sense it means evidence so given which has been recorded in writing. It is a fundamental principle of the English law of evidence that wherever it is possible a witness must be produced in court to be personally examined and cross-examined; and, if this can be done, no record of evidence formerly given by him will be accepted as a substitute for appearance. If the witness cannot be produced either because he is dead or too ill to travel, or insane, or kept out of the way by the person against whom his evidence is used, then his deposition is admissible. But in this case the person against whom the evidence is used in a criminal case must have had the opportunity by himself or his legal adviser of cross-examining the deponent. When any person has been arrested upon the charge of committing an indictable offence, the magistrate before whom he is brought should cause all the evidence given to be taken down in writing. Magistrates are also empowered to take the depositions of persons who are so ill that they are not likely to be alive at the time of the trial.

[See Stephen, *Digest of the Law of Evidence*, art. 32 and 140-142]. F. C. M.

DEPOSITUM. Expression of Roman law for the contract which arises when goods are left in some person's custody, no reward being given to that person for keeping them. E. S.

DEPÔTS ET CONSIGNATIONS (CAISSE DES). A public establishment in France charged to receive and manage under the responsibility of the state all obligatory deposits of money or securities, comprising the funds of benefit societies and savings banks, guarantee money, judicial consignations pending judg

ment, unclaimed successions, endowments of public institutions, pension funds, etc. The Caisse was charged with the sinking fund of the public debt until its suppression. It also receives voluntary deposits; but the amount is unimportant since the interest has been reduced to 1 per cent. The total liabilities of the Caisse, on the 31st December 1909, amounted to £207,760,000, nearly three-fourths of which were to the savings banks. The funds are employed in rentes, treasury bills, and advances to public bodies; the revenue being credited to the different classes of deposit accounts at variable rates of interest. T. L.

DEPRECIATION. Depreciation is a term used by accountants to describe the reduction in value that takes place in the machinery and plant of a factory or other undertaking in which industrial operations are carried on, which reduction in value must be provided for in the account of profit and loss, before arriving at a present value. Manufacturers, shipowners, or others who treat the annual earnings of their property as income, deducting only the actual outgoings for repairs will soon find themselves with a diminished capital. But, while repairs alone will not maintain a full value or balance the inevitable effects of time and use, the necessity for depreciation may be reduced or avoided by an expenditure out of current earnings for renewals and extensions. Depreciation arises from various causes, but among manufacturers it is generally confined to the loss by "wear and tear." Thus in the statutes under which the inland revenue is collected the commissioners who make the assessments for income tax are authorised "to allow such deductions as they may think just and reasonable as representing the diminished value by reason of wear and tear during the year of any machinery or plant used for the purposes of the concern." But a reduction in value may arise from other causes. For in arriving at the present capital value of machinery or plant it must also be considered whether any of it has become obsolete or has, owing to changes in trade, a less earning power than formerly. Alterations in value may be dealt with in various ways. The most usual is, to write off in each annual account a percentage from the capital value of the preceding year, this percentage either differing for the various classes of plant such as buildings, boilers, machinery, and horses, or being an average rate over the whole. This system of dealing with a constantly reducing value spreads the depreciation over a long period. For 5 per cent so applied would, in 20 years, still leave 36 per cent of the original value. The rate of depreciation may have to be varied. Thus if owing to active trade a manufactory has been working longer hours than usual, or the machinery has been forced to meet an exceptional demand, it is proper and prudent to write off more than usual for wear and tear. On the other hand dull times and short hours may justify a lower rate than usual, though it must be remembered that buildings and plant deteriorate even when idle. Notwithstanding this annual depreciation the tendency of most concerns is to grow in value owing to the expenditure for extensions, which may under such a system be properly added to the capital value. But whatever the methods adopted for estimating and stating the depreciation, it may be said in regard to any of them that the object in view is so to treat the nominal capital in the books of account that it shall always represent as nearly as possible the real value.

Occasional valuations may serve as a useful check in the correctness of a depreciation system, and it is frequently from the inconvenience and cost of making them that they are not made every year. An error may be in either direction. Where there is only one proprietor or few partners, an excess of caution may do no harm, the real value remaining even if too much is written off for depreciation in the books of account. But such an excess is unfair in the case of shareholders who may have only a fleeting interest in the undertaking, and who, not being made acquainted with the details of the annual "profit and loss" accounts, may suffer a diminution of income and a reduced value in their shares for the sake of those who will be shareholders hereafter. Where the nature of the property may render it difficult to estimate correctly the rate of depreciation, the case is sometimes met by establishing a RESERVE (*q.v.*) which, standing separately in the accounts, shows to all concerned a fund available for division in the future. Sometimes depreciation in value is met by the establishment of a SINKING FUND (*q.v.*) Thus the tenure of land or buildings may be shortening; the exclusive patent rights of valuable machines or processes may have only a short time to run; or the minerals in a mine may be consuming. In each of these cases a fund is necessary to give back the capital that has been originally embarked in the undertaking. In some cases the gross earnings are divided each year as income among the shareholders, each of whom is left to provide his own sinking fund. So long as the facts are clearly known to all concerned one system may be as good as the other. In large permanent undertakings like railways there is generally no separate system of depreciation, it being deemed that the value of the property is shown to be maintained by the continual working and by taking care that expenditure for renewals is all defrayed out of current earnings.

But while, in a large undertaking like a railway, the annual expenditure for repairs and renewals may fairly balance the deterioration that is continually going on, smaller concerns

not having so extensive a plant may be subjected to irregular outgoings that will disturb the annual average rate of profit. In some such cases instead of providing beforehand for exceptional renewals by a depreciation rate or reserve fund, the necessary money is borrowed and charged to a SUSPENSE ACCOUNT (*q.v.*) which is paid off by instalments in future years. This is obviously unsound where the expenditure has merely maintained or restored the earning power of the concern, and has not increased it.

E. M.

DEPRECIATION OF MONETARY STANDARD may be defined as the lowering of the value of money in relation to goods. The conception of a change in the value of the thing in relation to things in general is not quite clear; and has been pronounced invalid by high authorities. Thus J. S. Mill speaks of the "necessary indefiniteness of the idea of general exchange value—value in relation not to some one commodity, but to commodities at large" (*Political Economy*, bk. iii. ch. xv. § 1). "We cannot even suppose any state of circumstances" in which the idea would be definite. Yet, as Dr. Sidgwick has observed (*Political Economy*, bk. i. ch. ii.), the same Mill, in the chapter next but one preceding, says that "during the last five years of our long struggle with Napoleon . . . the value of the standard itself was considerably raised"; meaning "an enhancement in the value of gold" in relation to commodities. With a like appearance of inconsistency Ricardo has some passages like the following:

"It has indeed been said that we might judge of its value [the value of a currency] by its relation not to one but to the mass of commodities. . . . Such a test would be of no use whatever. . . . To determine the value of a currency by the test proposed . . . is evidently impossible" (*Proposals for an Economical and Secure Currency*, § 2).

"When we speak of the high or low value of gold, silver, or any other commodity in different countries, we should always mention some medium in which we are estimating them. Thus, when gold is said to be dearer in England than in Spain, if no commodity is mentioned, what notion does the assertion convey? . . . Gold appears dearer or cheaper in Spain as the fancy of the observer may fix on the medium by which he estimates its value" (*Political Economy*, ch. xxviii.) But elsewhere Ricardo implies the conception which is in question: "In saying that gold is at a high price we are mistaken; it is not gold, it is paper which has changed its value. Compare an ounce of gold, or £3 : 17 : 10½, to commodities, it bears the same proportion to them which it has before done" (*High Price of Bullion;* Works . . . by M'Culloch, p. 279, ed. 1888). The difficulties urged by Ricardo and J. S. Mill show that variations in general prices cannot be precisely determined. That it is not wholly indeterminate their admissions show—backed by the reasoning of other theorists, especially MALTHUS and JEVONS (*q.v.*), and the evidence of ordinary language. That there was a depreciation of money in relation to things in general, after the influx of gold from California in the 19th century, few deny; that there was such a depreciation after the influx of silver from America in the 16th century, all admit.

Depreciation as here defined is theoretically ascertainable by observing the variation of the price of each of a number of articles, and taking the average of those variations. For discussion of the different methods of taking such an average see INDEX NUMBERS.

A summary method of ascertaining depreciation is afforded by the use of some one typical article as a *measure of value*—"a measure of the power of purchasing generally, or of commanding such important commodities as the necessaries and conveniences of life" (Malthus, *Measure of Value*, p. 2). As the article best fitted for this purpose Malthus selects *Labour* (*Pol. Econ.*, 2nd ed. ch. 2.—J. Bonar, *Malthus and his Work*, bk. iii. ch. 2). According to this view the depreciation of money is measured by the diminution in the quantity of labour which can be purchased for the same amount of money. Corn also has been proposed as a measure of value when the comparison is between distant periods (Adam Smith, *Wealth of Nations*, bk. i. ch. v.) An average between corn and labour is proposed by Malthus in the first edition of his *Political Economy*. In this connection should be mentioned Mill's statement: "To obtain an approximate measure by which to estimate value in use, perhaps nothing better could be chosen than one day's subsistence of an average man, reckoned in the ordinary food consumed by the class of unskilled labourers" (*Pol. Econ.*, bk. iii. ch. xv. § 2).

A measure proper for thus determining the depreciation of a debased coinage or an inconvertible paper money is bullion. A means of applying this measure is afforded by the EXCHANGES (*q.v.*) As Ricardo says: "While the circulating medium consists . . . of coin undebased, or of paper-money immediately exchangeable for undebased coin, the exchange can never be more above or more below par than the expenses attending the transportation of the precious metals. But when it consists of a depreciated paper-money [or of a clipped coinage] it necessarily will fall according to the degree of depreciation. The exchange will therefore be a tolerably accurate criterion by which we may judge of the debasement of the currency" (*High Price of Bullion;* Works, p. 274). It was thus that the depreciation of the

paper-money in England during the latter part of the Napoleonic war was shown to be from 15 to 20 per cent. The accuracy of such determinations countenances Ricardo's dictum that "it can only be by a comparison to this standard that . . . depreciation may be estimated." *Depreciation proper* perhaps the lowering of value thus measured might be called; it is not necessarily coincident with depreciation in the general sense above defined. Thus Mill in a passage above cited (*Pol. Econ.*, iii. 13, 6) states that in the Napoleonic war "paper, though depreciated relatively to the then value of gold, did not sink below the ordinary value at other times either of gold or of a convertible paper." Professor Walker adduces evidence that the premium on gold, the depreciation of the paper currency in Ricardo's sense, "does not measure the advance of general prices," the depreciation in the other sense of the term.

The propriety of the definition here adopted is that from it flow the chief consequences for good or evil which are attributed to depreciation. (1) A first approximation to an estimate of those consequences is that they are insignificant. Money being regarded as consisting of counters, it is indifferent whether there are more or fewer such. "Let us suppose that to every pound or shilling or penny in the possession of any one another pound, shilling, or penny were suddenly added . . . this increased value would do no good to any one; would make no difference, except that of having to reckon in higher numbers" (Mill, *Pol. Econ.*, bk. iii. ch. viii. § 2, and cp. ch. xiii. § 4). (2) A less abstract view takes into account the disturbance of contracts for deferred payments; the gain to debtors and loss to creditors, and persons with fixed incomes. As producers often belong to the former class, it has been held that, when prices are rising, "everything takes a new face; labour and industry gain life" (Hume, *Essay on Money*). On the other hand Adam Smith says of a debased coinage in a passage which, according to Ricardo, is "equally applicable to a depreciated paper currency" (*High Price of Bullion;* Works, p. 289), "it occasions a general and most pernicious subversion of the fortunes of private people; enriching in most cases the idle and profuse debtor at the expense of the industrious and frugal creditor" (*Wealth of Nations*, bk. v. ch. iii. p. 423, ed. M'C.) Different effects doubtless attend different species of depreciation. That which is due to government tampering with the currency is probably the most deleterious. (3) A nearer approximation to an estimate of the disturbance caused by the depreciation of a currency is obtained by taking into account the different degrees in which the prices of different articles are raised. Inconvertible paper-money issued by the government of a country at war is apt to swell first the prices of war-materials. Again a change in the agio of gold in relation to inconvertible paper may make itself felt in articles of export and import sooner than in the inland trade (see Adolph Wagner, *Russische Papierwährung*, and Krämer, *Papiergeld in Oesterreich*, 1885). The following seems to be the order in which different classes of articles are in general reached by a course of depreciation: first, wholesale commodities; second, retail commodities; third, labour. (4) A peculiar evil of a depreciated paper-currency is that its value is usually fluctuating. The evils of such fluctuation are well stated by Professor Walker (*Wages Question*). There is reason to think that a fluctuating currency favours the large capitalist, who is best able to weather such disturbances. In the case of clipped coinage ill effects are produced by the difference in the value of the coins according as they are more or less worn (Walker).

[For the general principles of the subject see the leading authorities which have been cited. Additional particulars relating to the consequences of depreciation may be found among the following:—W. Bela Foldes, *Ursachen und Wirkungen des Agios*, Konrad's *Jahrbuch*, 1882.—H. S. Foxwell, *Irregularity of Employment and Fluctuation of Prices*, 1886.—W. S. Jevons, *Investigations on Currency and Finance*, p. 77 *et seq.*—K. Knies, "Geldentheurund," *Zeitschrift für die Gesammte Staatswissenschaft*, 1858.—Krämer, *Papiergeld in Oesterreich*, 1885.—Marshall, *Third Report on Industrial Remuneration*, Appendix C, vol. ii. p. 422.—Scharling, "Detailpreise," Konrad's *Jahrbuch*, 1886.—Vita di Marco, *Moneta e Mezzi*, 1885.] F. Y. E.

DEPRESSION, AGRICULTURAL. Industrial enterprises are so inextricably interlaced that agricultural depression cannot be dissevered from commercial depression. A glance over the last fifty years reveals one prime factor in existing financial and social disturbances and many concurrent causes. The prime factor is the substitution of machines for men and the consequent increase in the facilities for the production and rapid distribution of produce. One tendency of this development of labour-saving agencies, sea and land carriage, and telegraphic communication, has been to extend uniformity of prices, to increase the stress of foreign competition, to render depression not local but almost universal. Subject to differences produced by commercial policy, the civilised world has now but one market, and suffers or prospers together. Another tendency, which has little direct bearing on agricultural depression, has been to supply the world so completely with manufactured articles that a danger of a glut arises. A third has been to disturb the parts played by capital and labour respectively. First, handicrafts and domestic manufactures were swallowed up by the machinery of individual capitalists; then, the last was in turn

displaced by associated capital, combined in increasing masses till little is left but the largest establishments. Small shops, small factories, small banks, small sailing ships for ocean transport, are replaced by stores, gigantic syndicates, joint-stock companies, huge ocean steamers. A fourth result has been the destruction of great quantities of what once was accounted wealth. To take one illustration only. The opening of the Suez Canal extinguished the sailing tonnage constructed to make the voyage round the Cape, and the new ships that were built to take the place of the old sailing vessels were displaced five years later by steamships. A fifth result has been temporary or permanent diminution of employment. For instance, the application of steam and machinery on farms, wharves and docks, on shipboard, and in factories, has thrown enormous numbers out of work. The saving effected in different departments of industrial effort by this displacement of muscular labour, this substitution of machines for men, varies from 80 per cent in the shoe trade to 40 per cent in the manufacture of machinery (*United States Bureau of Labour Report*, 1886). Agricultural labourers are least affected by this effect of the development of labour-saving agencies, because in many farming operations, and especially in the care of stock, men are needed. On the other hand, agriculturists have felt more severely than manufacturers the pressure of foreign competition which has resulted from the increased facilities of sea and land carriage. The values of agricultural imports rose between 1866 and 1883 from £77,069,431 (average of five years 1866-70) to £157,520,797.

So vast a change necessarily produced distress. Other causes intensified the crisis. Prices were disturbed by appreciation of gold in relation to commodities and depreciation of silver relatively to gold. An exceptional demand for gold and a falling off in the supply (*Report of the Silver Commission*, 1876; evidence of Sir Hector Hay) increased the purchasing power of the metal and lowered prices. At the same time the depreciation of silver, absolutely in relation to commodities in general, owing to the increased yield of silver mines, and relatively to gold, owing to the enhanced value of that metal, disturbed the trade with countries which employ silver or silver and gold as their standards of value. A series of commercial disasters further aggravated the depression. The prosperity of the country reached its height in 1866. Since that date, in spite of temporary inflations, it has never reached its former level. The opening of the Suez Canal (1869) not only brought Indian producers into competition with English, but broke down the system of warehousing and distribution of produce by which England had hitherto benefited. With the year 1870 began an inflation of prices. The sudden withdrawal of France and Germany from industrial competition enabled England to increase her exports by 10 millions; the requirements of the Suez Canal gave extraordinary stimulus to the shipbuilding trade; the railway development in Germany and America created exceptional demand for coal and iron. In 1874 the reaction began from inflated prices. The decline of the coal and iron trade, the stoppage, partial or absolute, of cotton mills, disputes between masters and men, bad harvests, complications arising out of the Eastern question, the default on the Turkish debt, depressed every industry. But the extent of the weakness existing in some parts of our commercial system was not revealed till the failures of the city of Glasgow, Caledonian, and West of England Banks in 1878. Various causes combined to prolong the reaction against the inflated prices of 1871-73 and the abnormal demand then made for labour and shipping. Of these causes some were foreign, some domestic, some temporary, and some permanent. Fluctuations in the standards of value, hostile tariffs, stagnant trade, keenness of competition, unsettled politics, are the principal causes that come from abroad At home the prolongation of the depression is attributed to the slow adjustment of supply and demand, owing to the accumulation, between 1870 and 1873, of savings not invested, to over-trading, trade unions, deterioration in quality of production, commercial failures, mutual distrust, wet or sunless seasons. Of these causes only one, foreign competition, with low prices as its consequence, must necessarily be permanent.

In the first part of the period under review the collapse of agriculture was primarily due to bad seasons; in the second to low prices. An inclement autumn in 1872, and an unfavourable spring, neutralised the fine harvest weather of 1873. 1874 was the last of a cycle of prosperous seasons. Yet rents continued to rise for at least two years longer. From 1875 to 1877 there was a succession of bleak springs and rainy summers, producing short cereal crops of inferior quality, mildew in wheat, mould in hops, blight in other crops, rot in sheep, disease in cattle, deteriorating the finer grasses of pastures, throwing heavy lands into foul condition. Upon British farmers, thus enfeebled by three bad seasons in succession, fell the growing force of foreign competition, which was suddenly quadrupled by the extension of wheat areas in America and India, and the new facilities of sea and land transport, and the low freightage rates of commercial depression. The sunless ungenial 1879 produced the worst harvest of the century. Since 1882 seasons have proved less uniformly inclement, and trade has shown signs of revival. But farmers have lost their capital, and are confronted by the problem of low prices and the difficulty of holding their own against the pro-

duce of rich unexhausted soils. It is probable that for many years to come this competition in corn and provisions will rather increase than decrease.

The results of this collapse of agriculture have been disastrous to the landed interests. The increase in the value of land for the last half century has been lost. The annual income of landlords, tenants, and labourers was less in 1886 (see Sir James Caird's evidence before the commission on the depression of trade) than in 1876 by £42,800,000; of this sum it has been calculated that landlords and tenants lost £20,000,000 each, and labourers £2,800,000. Landlords have reduced their rentals to the point at which they stood in 1836; farmers have lost 30 to 50 per cent of their capital (Sir James Caird's *Victorian Agriculture*); the money wages of labourers have fallen and many have been dismissed from employment. The land has been injured by bad seasons and weak farming; the live stock of the country has been diminished; quantities of crops have been ruined or deteriorated by the weather.

The loss to the agricultural classes is enormous. It is more difficult to estimate the absolute loss to the nation, or the general effect of agricultural depression upon commercial prosperity. The nation suffers by the diminution in the purchasing power of a class, by the destruction of capital through bad harvests, by the restriction in the demand for labour, and by the removal of capital from one industry to another, especially if it be a removal from within to without its boundaries. It does not at once suffer as a nation from the low prices of agricultural produce. Thus in 1851 the supply of meat per head was 91 lbs., and 317 lbs. of wheat were supplied to a population of 27 millions at a cost of £53,500,000. In 1885 115 lbs. of meat were supplied per head at a greatly reduced cost, and 400 lbs. of wheat to 36 millions of people at a cost of £43,700,000. Here then, so long as the money in payment for this food is earned in other industries, the nation profits by the low prices which ruin agriculturists. But there is a point at which the wider interests of the nation suffer from cheapness of food, if the price becomes so unremunerative as to drive land out of cultivation. As to the general effect upon commercial prosperity, the depression of agriculture destroys a considerable portion of the capital engaged in land, and locks up another in unrealisable investments; tends to congest the labour market by disturbance of the relations of supply and demand for agricultural labour; drives capital from land into other investments, and, by restricting the field, adds to the overproduction of manufactured articles.

[The following books and pamphlets treat of the practical side of the subject: Sir J. Caird, *The Landed Interest and the Supply of Food;* and "Victorian Agriculture" (in the *Reign of Queen Victoria*, vol. ii.).—R. E. Prothero, *The Pioneers and Progress of English Agriculture. Agricultural Depression* (Shrewsbury, 1879).—F. Blood, *Enquiry into the Causes of the Depression of Trade and Agriculture.*—H. Chaytor, *Agricultural Depression.*—J. L. Cowland, *Agricultural Depression in Devon and Cornwall.*—E. G. Man, *Commerce and Prospects of England.*—A. J. Burrows, *Agricultural Depression and how to meet it.*—S. Mason, *Agricultural Depression.*—A. A. Walton, *Agricultural Depression.*—Sir J. B. Lawes, *Fertility.*—R. G. Webster, *England's Colonial Granaries.*—C. Whitehead, *Fruit-Growing in Kent.*—Sir R. H. I. Palgrave, "Estimates of Agricultural Losses in the United Kingdom during the last thirty years" (*Journ. of Royal Statistical Soc.*, vol. lxviii. 1905). See also AGRICULTURE IN ENGLAND. On the politico-economical side of the subject, A. Mongredien, *History of the Free Trade Movement.*—F. J. B. Hooper, *Free Trade and English Commerce by Mr. Mongredien answered.*—F. Bastiat, *Popular Fallacies regarding Trade and Foreign Duties.*—R. Gill, *History of Free Trade.*—W. F. Ecroyd, M.P., *A Speech in Reply to the Attack upon Fair Trade by Mr. Gladstone.*—Sir E. R. Sullivan, Bart., *Free Trade Bubbles.*—Sir T. H. Farrer, Bart., *Free Trade and Fair Trade* (3rd ed. 1886).] R. E. P.

DEPRESSION OF TRADE. The royal commission appointed in Great Britain in the year 1885, to inquire into this subject, thus defined depression of trade, in the report adopted by the majority of its members:—"A diminution, and in some cases an absence, of profit, with a corresponding diminution of employment for the labouring classes." The particular instance of this depression into which the commission made inquiry was that dating from the year 1875, which was so conspicuously marked in agriculture; but the statement quoted from the report may be taken as a description of what is commonly meant and understood by depression of trade. The phrase, however, is used very freely and very loosely; and it is therefore best to anticipate more particular discussion of the subject by a few considerations which ought to be kept in mind, and which the above definition helps to explain. (1) All classes are not affected by depression of trade. It is to be observed that, in the first instance at least, profit, and profit alone, is by hypothesis curtailed. If wages suffer, they suffer through the lack of employment which results from the withdrawal of capital found to be invested unprofitably. But it is possible that profit might fall simply through the exertions of the labourers to obtain a larger share of the product as wages; and where the labourers are united enough to accomplish this, it follows of necessity that if by Trade Unions they have to maintain the "out of works," they must be able to check competition among themselves. It might be, therefore, that although fewer labourers were employed in a case of depression, those in employment might not suffer but gain. Again,

all persons who are in receipt of fixed salaries or incomes do not suffer from depression of trade; but, inasmuch as one significant phase of depression is a general reduction in prices, they are gainers and not losers. (2) Although the interdependence of industries is such that a diminution of profit in all may be expected to be simultaneous, or nearly so, yet it must be remembered that one industry, or class of industries, may be for a time subject to severe depression while others are flourishing. The retail and carrying trades are in a different position with regard to the earning of profits from the producing trades; for their percentage of profit depends, not on the ratio between cost of production and price, but on the quantity of custom and the number of transactions they engage in. (3) Depression may affect certain traders in one industry, and may not affect others. During the series of bad years, which, like Pharaoh's lean kine, followed and devoured the years of prosperity in which our trade went up by leaps and bounds, there were plenty of people, even in England, who were amassing fortunes in business all the time. Those who are unsuccessful are apt to lament the falling-off of business as the cause of their misfortunes; while the more lucky make no noise about their prosperity. It would be easy, in any trade or profession, to collect a multitude of evidence from people who could truly say their business was depressed, in the sense applied to the word by the commission. (4) We must be careful to discriminate between a genuine depression and that gradual process of thinning down profit which arises from the natural tendencies of our civilisation, and which is not temporary, but permanent. The slow but certain fall in the rate of interest, the larger share demanded and gained by labour, the increased competition, through the spread of education, for the earnings of business management, and the consequent reduction of these earnings, all combine to effect a chronic decline in profit.

The existence of a genuine depression at times, apart from all the above considerations, is undoubted. In Great Britain there have been numerous instances of such depression during the 19th century, the last of which began about the year 1875, and was the subject of the investigations of the royal commission of 1885 mentioned above. But the earlier phases of depression of trade offer in one respect a distinct contrast to the most recent—a contrast which seems to be symbolic of the modern conditions of commerce. While in former times trade was depressed after a period of great inflation followed by a *crisis*, the depression of late years was preceded by no crisis; and while former stages of depression passed away with some rapidity and gave place in turn to a period of inflation, the revival of trade which ultimately occurred after 1885 took a long time to become apparent, and was very gradual. This fact would seem to bear out the contention that trade is on a sounder footing than it used to be, however hardly depression may bear on traders; and also that the ten-yearly cycle through which British commerce has been wont to pass has given way to a more equable form of progress. (For an account of the earlier cycles in the 19th century, see art. CRISES. Also Leoni Levi, *History of British Commerce.*—Tooke's *History of Prices.*)

The evidence taken by the royal commission was voluminous, and was derived from representatives of all classes of the community; and from it we can gather the leading features of the depression, as it affected the more important industries. (For the effects on agriculture, see DEPRESSION, AGRICULTURAL.) As to trade in general, there was a concurrence of opinion that profits had been lowered, while wages as a rule had remained firm; but this latter proposition must be qualified by the fact that to a certain extent the employment of labour, particularly in some industries, had been less regular, and the real wages of labour therefore below the nominal rate. The rate of interest had also fallen. It was found that competition from abroad, both in our own and in foreign markets, had of recent years become keener. It was also shown in the evidence that the volume of foreign trade had increased largely even during the depression, but that in the matter of values the increase was small in comparison with that of earlier periods. It was shown that the income-tax assessments under schedule D (trades and professions) had increased very considerably since the beginning of the depression; but that the actual number of persons with large incomes had decreased by about 5 per cent, and of those with moderately large incomes in much the same proportion, while incomes between £200 and £1000 a year had increased 33 per cent. It was given in evidence by a number of witnesses that there was a great and apparently a permanent tendency in the supply of commodities to outrun the demand, and that this had given rise to a very general feeling that over-production, as it is called, was the chief cause of the depression. And with regard to labour, it was discovered that while the agricultural labouring population had largely diminished in numbers, by reason of their employers' losses and the throwing of land out of cultivation, neither the shipping nor the textile industries showed any sign that the surplus labour-population had found a place in these large fields of employment.

From these data, supplemented by many minor and incidental points disclosed in the course of the evidence, it is possible to arrive at the most diverse conclusions as to the causes

of the depression, and, it follows, as to the remedies which ought to be applied, if any. What may be called the most pessimistic side of the discussion, which was supported by numerous witnesses, was embodied in a separate report signed by a minority of the commissioners. It is curious that in one important matter the view taken by this minority coincides with the most extreme optimistic opinion; for according to both, the so-called depression is not a passing phase of commerce, but a permanent change in the economy of the state. Those who hold the pessimistic view were able to point to the fact that an immense quantity of evidence had been given before the commission which pointed to a diminished employment of productive machinery, especially in the textile industries; also to the increase in the value of imports of textile manufactures and the decrease in the value of exports of the same article. The loss —partial or total—of certain foreign markets for British goods is another point which was urged with much force; the inference being that foreign governments, having found that high tariffs were successful in shutting English goods out of these markets, would increase rather than diminish them:—a view which the so-called McKinley Act, passed in the United States since the commission finally reported, would undoubtedly have been used to strengthen, had it existed at the time. It was pointed out by those who held the opinion referred to that increase even in the value of trade in certain commodities is no proof of the flourishing condition of such industries. It was shown, for example, that in the ten years preceding 1883 the value of the yearly export of coal and iron had increased by more than £17,000,000; while it was notorious that the coal and iron trades had been suffering greatly during that period. The remedies proposed are generally in the direction of import duties of one kind or another. Tariff duties on manufactures coming from abroad are the most extreme form of this proposal; but countervailing duties in order to balance the effect of bounties when they are given, and a fiscal union with India and the colonies, on the basis of a protective tariff levied against goods coming from other countries, are more frequently recommended. The extreme view on the other side was not represented on the commission; but this may possibly have resulted from the fact that a number of the originally-appointed commissioners did not see their way to accept nomination. That view is well expressed in a work entitled *La Crise*, by M. Pirmez. According to this opinion the depression of trade is merely a temporary accentuation of an economic movement which has been slowly going on for years, and which is destined to go on until the relations between capital and labour are completely changed. The fall in profits is admitted, and also the fall in interest; but it is pointed out that these events happen not in one country alone, but in all countries; and that therefore the fear of the desertion of any country by capital and consequent diminution of wealth and employment is merely illusory. The wages of labour, it is maintained, do not fall, but rise; and it is asserted that the whole tendency of the process of which the depression is a phase is to reduce the interest on capital merely lent or invested, to reduce the profits of capital employed in business, and to reduce the wages or earnings of business management. This means the wider and more equal distribution of wealth, and is therefore regarded as a matter not of apprehension, but of congratulation. It may be observed that one of the proofs largely relied on by those of this opinion,—founded on an analysis of the income-tax returns,—is by no means conclusive. These returns show a gradual decline in the number of people with large revenues, and an increase in the number whose incomes are moderate. This does not in any way prove that wealth is more widely distributed, unless that conclusion is borne out by independent evidence. If at one time twenty men in one trade make £5000 a year, and four hundred under £5000, and if in ten years' time the figures are one above £5000 and 419 below it, it is impossible to say, without more proof, whether that result is due to a more even distribution of profit, or an accumulation of business and capital in a single hand, to the detriment of other traders.

Intermediate between these two extremes a great variety of views prevail. The most general is that the depression of 1874-85 was a genuine misfortune, shared no doubt by England with many other countries, but bearing with particular harshness on England, because of the great strides made by foreign competition in many branches of industry which were contemporaneous with it. Those who held this opinion did not regard the depression as permanent; and the events of the years which have followed the publication of the commission's report go far to bear out their views. The great demand for goods consequent on the Franco-German war is not unnaturally held to be the original cause of what is called overproduction, but is truly production of the wrong things. So greatly do modern modes of manufacture stereotype industry, and so curiously do the laws relating to joint-stock companies tempt to enterprise which offers a great temporary advantage but no permanent benefit, that we constantly see capital invested so that it cannot be withdrawn without ruin in some industry where it is equally unable to produce a fair return. The demonetisation of silver by Germany at the time of the suspension of the Latin league also contributed, by disturbance in prices to the difficulties of traders. Those

who hold the moderate view do not believe that what is injurious to capital is necessarily of advantage to the labourers, and they believe that some kinds of labour suffered severely during the recent depression. They do not believe that violent remedies, such as large import duties, would be serviceable, but rather look for such measures as amendment of the Limited Liability Companies' Acts for safety in the future, coupled with improved technical education and the spread of knowledge of the world's markets. In regard to the matter of countervailing duties a considerable difference of opinion prevails, many who are adverse to any form of protection being favourable to such an impost where an important industry is threatened with grievous loss or extinction.

[The report of the above-named commission contains an immense amount of information, both from English and foreign sources, bearing on this subject, and is by far the best compendium from which the question may be studied. Sir R. Giffen's *Growth of Capital*, published since the report, forms an excellent statistical commentary.] M. G. D.

DEPUTY. In law, one who exercises an office or other function in another's right, whose forfeiture or misdemeanour shall cause him whose deputy he is to lose his office. A man cannot appoint his deputy in all cases, but only when his own grant of the office justifies him in so doing (Cowel ed. 1727). In another sense the term is used of offices of state, and most anciently of the exchequer and mint. Thus in the absence of the king's treasurer on foreign service a deputy was appointed by commission, and in later times this practice was extended to many other fiscal offices. In certain cases, such as the hereditary offices of the king's court and exchequer, the holder in fee could appoint a deputy (Dialogus de Scaccario, i. 3; Madox, *Hist. of the Exchequer*, ch. xxiiij.) H. Ha.

DE QUINCEY, Thomas, the son of a prosperous merchant, was born 1785, and, after a brilliant literary career, died 1859. That a genius of so high an order of imagination found the abstract reasoning of political economy "Not harsh and crabbed as dull fools suppose" is instructive. The fascination which the severer aspect of the science had for De Quincey is expressed in that passage of the *Confessions of an Opium Eater* where the writer describes how he was aroused from lethargy by the study of Ricardo's *Political Economy* (1818). The fruit of that study appeared in the *Dialogues of three Templars* (1824), a brilliant exposition and defence of the Ricardian theory of value. The paradox, for so De Quincey admits it to be in a good sense, that real value is measured by quantity of labour, that "a million men may produce double or treble the amount of riches, of 'necessaries, conveniences, and amusements,' in one state of society that they could in another, but will not on that account add anything to value" (Ricardo, *Political Economy*; chapter on "Value and Riches"), is expounded by the disciple even more fearlessly than by the master. "My thesis," says X, the Socrates of the dialogues, who represents the author's views, "is that no such connection subsists between the two [the quantity obtained and the value obtaining] as warrants any inference that the real value is great because the quantity it buys is great, or small because the quantity it buys is small." "I have a barouche," says the objector, "which is worth about 600 guineas at this moment. Now, if I should keep this barouche unused in my coach-house for five years, and at the end of this term it should happen from any cause that carriages had doubled in value, *my* understanding would lead me to expect double the quantity of any commodity for which I might then exchange it, whether *that* were money, sugar, besoms, or anything whatsoever. But *you* tell me no." . . . "You are in the right," replies X, "I *do* tell you so . . . . If A double its value, it will not *therefore* command double the former quantity of B" [B representing any assignable thing] (Fourth Dialogue). The intelligent Bailey (*q.v.*) might well be stirred by these startling deductions to attempt a reply (preface to *Critical Dissertation*). In the later dialogues Ricardo's theory of value is defended against Malthus. This controversy had been commenced in the "Measure of Value," published in the *London Magazine* for December 1823. An article on "Malthus" in an earlier number of the same journal contains a mild attack on the theory of population. Some of the points are elucidated in a letter to Hazlitt which appeared in the *London Magazine*, December 1823. To the same period belongs a sort of *éloge* of Ricardo, which De Quincey, shortly after the death of his revered master, contributed to the *London Magazine*, March 1824.

De Quincey's latest and greatest economical work is the *Logic of Political Economy* (1844). The more original portion of this book may be described as a vindication of the part played by utility in the determination of value. The cause is just and the reasoning ingenious; yet the censure with which J. S. Mill tempers his copious citation from this discourse seems deserved (*Pol. Econ.*, bk. iii. ch. ii. § 1, and § 3 *end*). Certainly De Quincey's illustrations are perfect. The rhinoceros which in the reign of Charles II. was sold for a figure far above the cost of importation, the *Valdarfer* copy of Boccaccio which Lord Blandford bought for £2240 and afterwards, when in pecuniary embarrassments, was sold by auction and purchased for £750 by Lord Spencer, whom he outbid at the first sale; Popish reliques which had a high value, but no cost of production (p. 60 *et seq.*, ed. 1844);—these and other "shining

instances" throw light upon an obscure subject. The "dry light" of logic is intensified by a coruscation of wit. Sometimes, however, the doubt occurs whether the writer was as competent to point a moral as to adorn a tale. Thus, in the case of the pearl-market, and the vividly-pictured slave-market (*ibid.* p. 77 *et seq.*) is it correctly stated that for "the *plebs* amongst the slaves," and the "ordinary pearls," value is determined by cost of production, while "the natural aristocracy amongst the slaves, like the rarer pearls, will be valued on other principles"? (see DIFFICULTY OF ATTAINMENT). Even the famous parable of the musical snuff-box (cited by Mill, *Pol. Econ.*, bk. iii. ch. ii. § 1) is not rightly interpreted by its author. It is not in general true of a bargain between two isolated individuals (see COMPETITION) that the price will be "racked up to U" (*ibid.* pp. 25-27)—the measure of the "intrinsic worth of the article in your individual estimate for your individual purposes"; in other words its TOTAL UTILITY (*q.v.*) to the purchaser (cp. Mill, *loc. cit.* § 1 *end*). The following passage seems more correct. "The purpose which any article answers and the cost which it imposes must eternally form the two limits within which the tennis-ball of price flies backwards and forwards. Five guineas being, upon the particular article X, the *maximum* of teleologic price, the utmost sacrifice to which you would ever submit, under the fullest appreciation of the natural purposes which X can fulfil, and then only under the known alternative of losing it if you refuse the five guineas, this constitutes the one pole, the aphelion, or remotest point to which the price for you could ever ascend." The other limit is fixed by the cost of reproduction. These are "the two limits between which the price must always be held potentially to oscillate" (*ib.* pp. 105, 106). But even here it is not clearly stated that, in the absence of competition, the terms are indeterminate; the "tennis-ball" may fall anywhere between the extreme limits. It is nowhere stated that in the presence of competition the upper limit is formed, not by *total*, but FINAL DEGREE OF UTILITY. De Quincey is far removed from the recent theorists to whom he bears a superficial resemblance by his not having attended to final utility and cognate conceptions. The connection between demand and value is denied by him on the strength of exceptional though striking instances (*ibid.* p. 231, quoted by Mill, bk. iii. ch. iii. § 2). "A crazy maxim," he says, "has got possession of the whole world: viz. that price is, or can be, determined by the relation between supply and demand." This imperfect conception of supply and demand is the special object of Mill's severe remarks on De Quincey. Mill's censure is endorsed by Sir Leslie Stephen in his article on De Quincey in the *Fortnightly Review* (1871). Mr. Shadworth Hodgson in one of his *Outcast Essays* has traversed this unfavourable verdict.

Whatever be the fate of De Quincey's cardinal tenets, it is certain that his occasional suggestions, the minor pearls of his discourse, enhanced as they are by a setting of consummate literary perfection, will preserve a lasting worth. Some important corrections of Ricardo's expressions deserve particular notice. De Quincey perceived, just as clearly as more recent critics, that "the current rate of profits, as a thing settled and defined, must be a chimera." He exposes "the puerility of that little receipt current among economists, viz. unlimited competition for keeping down profits to one uniform level. . . . Everybody must see that it is a very elaborate problem to ascertain even for one year, still more for a fair average of years, *what* has been the rate of profits upon the capital employed in any one trade" (*ibid.* p. 237 *et seq.*) What more could Cliffe Leslie say? De Quincey complains much that Ricardo, while insisting on the tendency towards the degradation of soils (the LAW OF DIMINISHING RETURNS, *q.v.*), has not sufficiently emphasised the counter-tendency towards improvement in the arts of cultivation. "The land is travelling downwards, but always the productive management of land is travelling upwards" (*ibid.* p. 239). De Quincey discerns what a handle is afforded by Ricardo's partial statement to "the systematic enemies of property" . . . "the policy of gloomy disorganising Jacobinism." Rent is referred by De Quincey not to the "indestructible," but the *differential* powers of the soil. Rent is defined as "*that portion of the produce from the soil* (or from any agency of production) *which is paid to the landlord for the use of its differential powers as measured by comparison with those of similar agencies operating on the same market.*" The parenthesis exemplifies the pregnancy of De Quincey's occasional suggestions. In presenting the theory of rent, De Quincey employs an admirable geometrical construction. As in the construction which Prof. A. Marshall has made familiar (*Economics of Industry*, bk. ii. ch. iii.), the *ordinate* in De Quincey's diagram represents produce. But the *abscissa* represents not doses of capital but qualities of soil. The two constructions have been combined by the present writer in an illustration of the *abstract theory of rent*, contributed to the British Association (Report, 1886). Referring to the use of diagrams, De Quincey well says:—"A construction (*i.e.* a geometrical exhibition) of any elaborate truth is not often practicable; but, wherever it is so, prudence will not allow it to be neglected. What is called *evidentia*, that sort of demonstration which shows out . . . is by a natural necessity more convincing to the learner. And, had Ricardo relied on this constructive mode of illustrating his chapters upon

rent and upon wages, they would not have tried the patience of his students in the way they have done." Had De Quincey pursued his mathematical studies further, and applied the conceptions of the infinitesimal calculus to the theory of value, he would have escaped his capital error of having confused integral (or Total, *q.v.*), with differential (or final) utility. If he had worked with *d*U, instead of U, he might have anticipated Jevons.

All the works which have been referred to will presumably be included in *The Collected Writings of De Quincey*, by Professor Masson, 1890. In the American edition of 1877, called the Riverside edition, all are to be found except the letter in reply to Hazlitt (*London Magazine*, December 1823), and the *éloge* of Ricardo (*ibid.* March 1824). These are reprinted in *De Quincey's Uncollected Writings* by J. Hogg, 1890. The Edinburgh edition of De Quincey's works in sixteen vols., completed 1871, omits also the *Logic of Political Economy*. Earlier collections are still more incomplete. F. Y. E.

DERELICT. The legal quality of derelict was recognised by the Roman Law (Dig. i. xlvij. Tit. ij. De Furtis). Anything wilfully cast away either on sea or land. Goods thrown out of a ship, to lighten the same in case of distress, are not derelict for want of intention (Just. Inst. II. 1. 48). If a ship made jettison without hope of recovering the goods they were derelict to the finder (Rolle of Olayron, 32, 34). Derelict lands suddenly left by the sea belong to the crown, except in case of an arm of the sea belonging to a subject, but if the sea recede slowly, by imperceptible degrees, the land thus gained goes to the owner of the adjacent soil. This was ascertained by commission, and is a subject for a jury. Boats or other vessels forsaken or found on the seas without any person in them are called derelict. Of these the admiralty has the custody and the owner can recover within a year and a day.

[Moore on *Foreshore.—Black Book of Admiralty* (Rolls).—*Fleta*, III. 2.—Hale, *De jure Maris.*]

H. Ha.

DERELICTIO. Expression of Roman law for the abandonment of any object of property with the intention of renouncing all rights of ownership over it. E. S.

DE SANCTIS, Marco Antonio, lived in the 16th century and the beginning of the 17th. Toppi (*Biblioteca napoletana*, Napoli, 1678, p. 204) says he was born at Nocera dei Pagani, but gives no other biographical indications. Two dissertations of De Sanctis are extant; their scientific value is less than their historical importance, because Antonio Serra would probably never have written his famous *Breve trattato delle cause che possono fare abbondare i regni d'oro e d'argento* (1613), if it had not been for the writings of De Sanctis, which he undertook to refute. The two pamphlets of De Sanctis bear the titles: *Discorso di Marc'Antonio De Sanctis intorno alli effetti che fa il cambio in Regno*, in Napoli, appresso Costantino Vitale. 1605; and *Secondo discorso di Marc'Antonio De Sanctis, intorno alli effetti che fa il cambio in Regno sopra una risposta che è stata fatta adverso del primo;* in Napoli, nella stamperia di Felice Stigliola, a Porta Reale, 1605. De Sanctis endeavours to prove, in the first *Discorso*, that the only remedy against the scarcity of money which was felt in his days in the realm of Naples, would be an act of the government called *Prammatica*, by which the value of foreign coin should be fixed in the money of the country, and heavy penalties prescribed to enforce the established ratio in the payment of all bills of exchange and to prevent any other attempt to give money a value different from that which the *prammatica* prescribed. His advice was followed, but given up two years later, when the effects of the *prammatica* had made people wiser. The first pamphlet of De Sanctis was answered by an anonymous Genoese author to whom he replies in the second one.

[Sir T. Twiss, *View of the Progress of Pol. Econ. in Europe*, 1847, Lect. I.] M. P.

DESCENT OF PROPERTY. Sir Henry Maine (*Early Law and Custom*, London, 1883) points out the connection between ancestor worship and the descent of property in the Eastern and the Roman Empires. "Almost all the English law on the subject of the descent of personalty, a great deal of continental law on the same subject, and some part of our law of realty has for its foundation the 118th Novella Constitutio of Justinian. This novella is the last revision of the older Roman law of succession after death, which was formed by the fusion of the rules of inheritance contained in the venerable Twelve Tables with the equity of the Prætor's Edict: two streams of law profoundly influenced at their source as no reader of M. Fustel de Coulanges can doubt by the worship of ancestors" (Maine). In the *Principles of the Law of Succession to Deceased Persons*, by T. R. Potts, London, 1888, will be found a brief sketch of the history of the law of descent in England. Kenny and Laurence, in their *Essays on the Law of Primogeniture*, Cambridge, 1878, trace the history of primogeniture in England. *The Succession Laws of Christian Countries*, by Eyre Lloyd, London, 1877, contains a summary of the law of descent in the principal European countries. In France, Belgium, Prussia, Austria, and other continental states, on an intestacy all children take equally, no distinction being drawn between males and females or between real and personal property. In England, and in countries that have adopted English common law as the basis of their legislation, the eldest son as a rule succeeds to real property to the exclusion of all other children, whilst the personalty is divided between the widow and the children. Two

important changes were introduced in the 19th century in England and Ireland. By the 53 & 54 Vict. c. 29, if there is no issue, and the net value of the realty and the personalty does not exceed £500, then the whole estate goes to the widow: if the net value exceeds £500 then the widow is to have £500, whilst by the 54 & 55 Vict. c. 66, § 84, any real estate registered under the act is on the death of the owner intestate to devolve on the personal representatives as if it were personal property.

[For economic effects of English as compared with continental law, see G. C. Brodrick, *English Land and English Landlords*, 1881.—*Systems of Land Tenure in Various Countries*, Cobden Club Essays, 1870 (see BEQUEST, POWER OF; LAND, LAW RELATING TO).] J. E. C. M.

DESIGNS, COPYRIGHT IN. By laws passed in 1737 and 1744 France recognised a right of property in designs applied to silks. In 1787 England by the 29 Geo. III. c. 38 gave protection to the first inventor of a design for linen or cotton cloth. Subsequent acts extended protection to mixtures of flax and cotton, and to animal substances. By the Patents, Designs and Trade Marks Act, 1883, a new or original design may be registered by its proprietor for a particular class or classes of goods, and by such registration the proprietor obtains copyright in the design, *i.e.* the exclusive right to apply the design to any article of manufacture or substance for five years. This act has been amended at different dates up to the Patents and Designs Acts of 1905 and 1907.

[W. N. Lawson, *Patents, Designs, and Trade Marks*, 1889.—Edmunds and Bertwick, *Law of Copyright in Designs* (1909).—W. M. Freeman, *The Patents and Designs Act, 1907* (1908).—R. Frost, *Patents and Designs Act, 1907* (1908).—D. Fulton, *Law and Practice relating to Patents, Trademarks, and Designs* (1905).—J. W. Gordon, *Statute Law relating to Patents of Inventions and Registration of Designs* (1908).—G. C. Marks, *Inventions, Patents, and Designs*, with text of Act (1907).—S. G. Pirani, *Index of Patent, Design, and Trade Mark Cases, 1884-1909* (1910).—Roberts and Moulton, *Patents and Designs Act, 1907* (1907). (See COPYRIGHT.)] J. E. C. M.

DESMARETS, NICOLAS (1648-1721), controller-general of finance under Louis XIV. (1708-1715), was a nephew of Colbert, who gave him a post in his bureau. He rose to be *maître des requêtes*, and on the death of his uncle in 1683 was made *intendant des finances*. In 1703 the king nominated him a director of finance (Saint Simon, *Mémoires*, iv. 183), and in 1708 gave him the controllership of the finances. "Il était tout à fait l'homme de la situation," says Vührer, who describes him as possessing "une remarquable sagacité, une intelligence vive et profonde à la fois, beaucoup de justice et de rectitude dans les idées . . . une fécondité, une abondance d'imagination inépuisable" (*La Dette Publique*, i. 128). The condition of affairs was most alarming, with an increased expenditure and a diminished revenue. The income from taxation had fallen from 112 to 75 millions of livres, the yearly expenses had risen from 119 to 220 millions. The debt was 2 milliards. Arrears of 36 millions were due to the army, and the revenue of five years had been spent in anticipation. Desmarets commenced by repealing a decree which permitted payments in specie or paper. He allowed the capitation tax to be commuted by a payment of six years in advance. He doubled toll-duties and contracted with Samuel Bernard and others loans extending to 230 millions. These expedients enabled him to get through 1708, but the troubles of the next year began with a winter of unusual severity. To meet the famine which followed he brought wheat from all parts of Europe, enforced a special tax on the rich, sold the undergrowth of the state forests, and effected a recoinage. He received the dignity of minister from Louis.

The king did not accept the onerous conditions offered by the allies in 1709. To meet the enormous charges of the campaign Desmarets proposed a war tax of a *dixième* on all property and incomes. Even the clergy and nobility were not exempted. The new tax produced 25 millions. He also borrowed 15 millions from some merchants. In 1711 he commenced a more regular system and converted into 5 per cent *rentes* all the various state loans. The energy and ability of Desmarets in putting in order the financial embarrassments of the kingdom were of great help to Louis XIV. "Si nos gens de guerre avaient le courage et le génie de Desmarets nous gagnerions toutes les batailles," said Madame de Maintenon. In the seven years of his administration the net produce of the ordinary revenues did not exceed 269 millions, and during this time he was obliged to find 1300 millions of extraordinary resources, and even then he left over 300 millions unpaid (A. Vuitry, *Le désordre des Finances*, p. 25). He hoped in 1715 to produce a properly-balanced budget if the king lived to bestow his favour for two years. Louis died, however, 1st September 1715, and Desmarets was dismissed by the regent. He retired to Maillebois, where he died 4th May 1721. Saint Simon, who was ill-disposed towards Desmarets, draws his character as that of a man "qui avoit plus de sens que d'esprit, et qui montroit plus de sens qu'il n'en avoit en effet; quelque chose de lourd et de lent, parlant bien et avec agrément, dur, emporté" (*Mémoires*, xviii. 157). His son, the Marquis Desmarets de Maillebois, marshal of France, is famous for his Italian campaigns.

Desmarets presented to the Regent *Mémoire sur l'administration des finances depuis le 20 Février 1708 jusqu'au 1er Septembre 1715* [Paris, 1716] 8vo, (also reprinted about 1789, and in the *An-*

nales Politiques (1757) of the Abbé Castel de St. Pierre) "Très-curieux," says Lenglet du Fresnoy, "il vient de main de maître, mais il n'a pas tout dit" (*Méthode pour étudier l'Histoire*, xii. 337). In the opinion of Voltaire "ce mémoire prouve qu'il avait des talens, une grande modestie et des intentions droites" (*Siècle de Louis XIV.*, 1819, i. 38; see also ii. 31).

[Saint Simon, *Mémoires*, 1856, etc., tomes ii., iv., vi., vii., ix., xi., xiii., xviii.—*Nouveau Dictionnaire d'Économie Politique*, 1890, i. 669-701.—F. V. de Forbonnais, *Recherches et considérations sur les Finances de France*, Basle, 1758, 2 vols. 4to.—A. Vuitry, *Le désordre des Finances à la fin du règne de Louis XIV.*, Paris, 1885, 8vo.—R. Stourm, *Les Finances de l'Ancien Régime*, Paris, 1885, 2 vols. 8vo.—A. Vührer, *Histoire de la Dette Publique en France*, Paris, 1886, 2 vols. 8vo.—Monthyon, *Particularités sur les Ministres des Finances*, Paris, 1812, 8vo.] H. R. T.

DESTUTT DE TRACY, Antoine Louis Claude, Comte (1754-1836), born in the Bourbonnais, died at Paris. He was a member of the constituent assembly, and was arrested and imprisoned during the Reign of Terror. He was set at liberty after the 9th Thermidor, 27th July 1794. Although he became a senator under the empire, and subsequently a peer of France under the Bourbon restoration, he retained throughout his early sympathies with liberty. From the year 1808 he had been a member of the French Academy. When, in 1832, the Academy of Moral and Political Science was re-established, he was invited to join the section of moral science. As a philosopher he was one of the last survivors of the *école sensualiste*, a school whose method of thought may best be defined in the words of one of their members, "Penser c'est sentir, rien que cela," and he was also an economist of great distinction. As early as 1798 he wrote, at the request of the well-known Jefferson, his *Commentaires sur l'Esprit des Lois de Montesquieu* (1 vol. 8vo, 1819). In this work he corrected some of the economic errors into which that able thinker had fallen. In 1804 he published his *Traité de la volonté*, part of his *Eléments d'Idéologie*, the larger part of which formed a treatise on political economy. This work was reprinted, without any modification, under the title of a *Traité d'économie politique*, in 1823 (1 vol. in 18mo). In these two works, the commentary and the treatise, Destutt de Tracy shows that he had attained a higher level than the majority of his contemporaries. He has obtained a popularity equal to his deserts, notwithstanding the somewhat metaphysical form with which he had invested his subjects. Bonaparte had him in view when he inveighed against the "Idéologues."

A. C. f.

Destutt de Tracy and Ricardo. A reference to M. de Tracy will be found in Ricardo's *Principles of Political Economy and Taxation* ed. 1852, note p. 171. He says with respect to the *Éléments d'Idéologie*, "In this work M. de Tracy has given a useful and an able treatise on the general principles of political economy, and I am sorry to be obliged to add, that he supports, by his authority the definitions which M. Say has given of the words 'value,' 'riches,' and 'utility.'" In the text Ricardo observes, "I cannot agree with M. Say in estimating the value of a commodity by the abundance of other commodities for which it will exchange; I am of the opinion of a very distinguished writer, M. Destutt de Tracy, who says, that 'To measure any other thing is to compare it with a determinate quantity of that same thing which we take for a standard of comparison for unity. To measure, then, to ascertain a length, a weight, a value, is to find how many times they contain metres, grammes, francs, in a word, unities of the same description.'" An interesting account of Ricardo's meeting with De Tracy is given in the *Letters of Ricardo to Malthus*, No. lxxxii., edited by J. Bonar, p. 211, ed. 1887.

DÉTRACTION, Droit de. In France, before the Revolution, the right of aliens to inherit property was limited by the *droit de détraction*, which enabled the state to confiscate part of any bequest or inheritance falling to an alien. For the history of its abolition see Aubaine, Droit d'. It need only be remarked here that at the present time, should the laws of another country impose any tax of this kind on a share of an inheritance left to a Frenchman, the French law will, where possible, compensate the person so damnified out of any share of the inheritance falling to an alien resident in France. In England and other countries, especially Russia, the right of aliens to inherit land is either entirely denied or severely restricted; but these rules, though analogous to the *droit de détraction*, have a political not a financial aim.

[*Les Codes annotées de Sirey, édition entièrement refondue*, par P. Gilbert, 1847.—Littré's *French Dictionary*, *s.v.*—*Dictionnaire général de la Politique*, par Maurice Block, 1873, *s.v.* "Étranger."] C. G. C.

DEVELOPMENT, or evolution, as distinguished from mere change, means a *growth*, or the unfolding of qualities present, but at first latent, in the subject concerned. Darwinism (*q.v.*) is therefore not a doctrine of development or evolution unless we regard animated nature collectively as one subject which remains the same throughout its changes. The idea of development applies to man and human societies, and especially to their science and culture, for there is present an identity of the subject (humanity) with continuity through the changes —*e.g.* from Greece, through Rome and the middle ages to modern civilisation—and preservation of the results of the past.

Economic evolution has been used in two senses (*a*) the growth of new forms of industrial organisation, keeping pace with new wants, new powers of science over nature, and new political relations, and (*b*) the growth of economic theories, which may or may not be in correspondence with (*a*). The name is best kept for the first of the two phenomena; and the latter may be called the evolution of economics. In both cases the use of the name evolution instead of change seems to imply that both the outward changes, say in European industry during the last hundred years, and the changes in theory, say from Adam Smith to J. S. Mill, have followed a course for which it is possible to discover some logical necessity.

The term evolution was not unknown in the 18th century, and the idea became the ruling thought of Fichte and especially of Hegel and his followers. In England, the idea has gained currency through the writings of Spencer and Darwin; and evolution in the sense conceived by biology appears to be the essence of the popular philosophy of our day. Marx has applied the notion to economics, and the relation of the two is already a topic of controversy. The extreme left of the school of historical economists hold that there are as many forms of economics, all relatively true, as there are separate peoples and separate epochs; and they would not distinguish the development of economics from the general progress of historical change. The conception of economics as a body of doctrines of universal validity or absolute truth is no doubt discredited; but the conception of "economic categories" as a permanent basis of further development has gained ground; and seems indeed to be required by the very notion of development.

[For distinction of historical and economic categories, see A. Wagner, *Lehrbuch der politischen Oekonomie, Grundlage*, pp. 352 *seq.* and the references there given to Rodbertus and Schäffle.—For distinction of development from Darwinism see E. Caird, *Philosophy of Kant*, (2nd ed. 1889) vol. ii. pp. 539 *seq.* and S. Alexander, *Moral Order and Progress* (1889), pp. 139, 309, 382, etc.] J. B.

DE VIO, F. Tommaso (1470-1534), born at Gaeta, and sometimes called Thomas de Vio Cajetan, was famous for his learning; at Ferrara, where he held disputations with Pico della Mirandola, he was made a Doctor *honoris causa;* he taught philosophy in the *Ginnasio Romano*, and was made Cardinal of S. Sisto by Leo X. He was consulted in all the weighty theological questions of his time. Amongst these was the question of Henry VIII.'s first marriage, which he declared valid. He was sent to Germany to controvert the opinions of Luther. He wrote a great many works of which a list can be found in A. Ciaconii: *Vitæ et res gestæ Pontificum romanorum et Cardinalium.* Romæ. 1677, vol. iii. p. 390-394. Here only the more important concerning economical topics are mentioned:

De Usura, written in Milan, 1500; *De Cambiis*, written also in Milan, 1499; and *De Monte Pietatis*, written at Pavia, 1498, all published 1596 in Venice; F. Thomæ de Vio Caietani, ordinis Prædicatorum, *Opuscula omnia.* Venetiis, 1596, p. 168 *et seq.* In his pamphlet *De Usura*, De Vio does not discuss the argument *ab ovo* and exhaustively, intending rather to solve some special cases in which he thinks the current opinions of canonists wrong or exaggerated. In his pamphlet *De Cambiis*, he declares himself opposed to the profession of what then was called a *cambist*, recognising only the legitimacy and utility of the change of money against money. In his pamphlet *De Monte Pietatis*, he proves that these establishments for pawnbroking served simply to cover a species of usury. De Vio's pamphlets must, therefore, be considered as one single tract in which he discusses the same subject, viz. usury, under three different aspects, and in which he follows the opinions current in his time, although sometimes showing views somewhat broader than those of the canonists. M. P.

DEVISE. A gift of land or other real property by will. The person to whom the gift is made is called the devisee. E. S.

DEW, Thomas Roderick (1802-1846), was born in Virginia and was educated at the College of William and Mary; in 1827 he was appointed professor of history, metaphysics, and political economy in the same institution, and in 1836 president; he died at Paris while travelling. Dew was a most thorough and earnest teacher of history, and exercised great influence throughout the south in upholding public opinion in the support of free trade and negro slavery. On strictly economic subjects he wrote: *Lectures on the Restrictive System*, Richmond, 1829 (pp. 195). In this Dew questioned the general advantage to be gained from manufactures, since they are liable to great fluctuations; and a factory population is not only unfavourable to liberty, but turbulent and of necessity dependent. He wrote an *Essay on the Interest of Money and the Policy of Law against Usury*, Shellbank, Va., 1834 (pp. 24); in which usury laws are regarded as influencing unfavourably the distribution and circulation of capital, and checking the natural division of employments and treating the question with special reference to the farming interest. He also wrote a *Letter on the Financial Policy of the Administration and the Laws of Credit and Trade*, Washington, 1840 (pp. 16), attributing the crisis of 1837 not to banks but to the course of trade; banks are the effect and not the cause of speculation. Dew opposed the subtreasury system inasmuch as it tended to unsound banking operations. For an interesting statement of his educational work and for

bibliographical references, see *Circ. of Information of U.S. Bureau of Educ.*, No. 1, 1887. *College of William and Mary*, by Professor H. B. Adams, pp. 54-56. D. R. D.

DIAGRAMS. For the purpose of conveying readily to the mind the general facts contained in a table of figures, nothing seems better suited than some form of diagrammatic representation.

When the relative magnitudes of a number of disconnected quantities are simply concerned, a series of geometrical figures, circles, squares, or oblongs whose areas are proportional to those magnitudes, is commonly employed.

The delineation of the varying circumstances of the different parts of a country in respect to such matters as density of population, degree of poverty, etc., by colouring a map in different tints, which has been frequently employed (notably by Charles Booth in *Labour and Life of the People*), is a method which is very readily understood.

The curves which record the readings of a barometer or thermometer are illustrations of another class of diagrams which are very largely used for economic purposes.

It requires a very special training to be prepared to grasp readily the salient points of complicated schedules of figures, which can, however, be exhibited very readily even to the untrained by means of such diagrams. This renders them of great service to the teacher of economics. But curves of similar construction are invaluable adjuncts in the study of economic theory, possessing all the general advantages of arithmetical illustrations, while they are less liable than these to admit the unwary assumption, in the data of illustrations, of the result which it is desired to establish by their help.

If we wish to draw a curve showing the variations in the price of some commodity (say iron) in the course of a number of years we proceed as follows. Along a line Ox (Fig. 1)

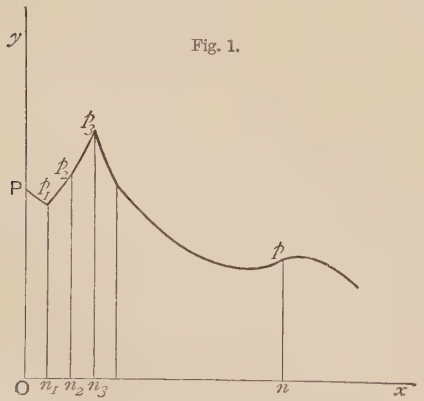


Fig. 1.

a number of equal distances On_1, n_1n_2, etc., are measured. We may take each of these distances to represent some convenient interval of time, an hour, day, year, or any other suitable interval. From the points O, n_1, n_2, etc. lines OP, n_1p_1, n_2p_2 etc., are drawn perpendicular to Ox and of such lengths as to be proportional to the price of iron at the epoch represented by the point from which the line is drawn. We might for example draw them on the scale of one-twentieth of an inch for each shilling of the price of a ton of iron, or on any other convenient scale. The points Pp_1p_2...being connected by a broken or curved line, such a line will exhibit the variations of the price of iron with the progress of time, in a manner which is quite as accurate as the table of figures from which the curve is derived, and which is far more striking to the eye of even the most skilled statistician.

The manner in which the connection between time and price is thus shown may be employed to show the concurrent variations of any two connected quantities in economics.

If the abscissæ (the distances along Ox) represent the amounts produced in a given time, such as a month or year, the ordinates (n_1p_1 etc.) denoting the corresponding prices at which the goods could be profitably produced, the curve becomes the ordinary supply curve.

If the abscissæ denote the quantities which could find purchasers at the prices denoted by the ordinates, we obtained the demand curve (cp. Demand Curves).

These curves cannot be drawn completely from records of experience, because actual experience covers in general but a small range of prices for any one commodity. No uncertainty is, however, owing to this cause, introduced into the arguments based on them, since the really important parts of them are those of which we have experience, and, in addition to this, the arguments commonly depend not so much on actual lengths of lines as on the general direction of the curve, whether upwards or downwards, and whether the slope of the curve be gradual or rapid.

It is the result of experience that—except in such a case as that of a collector of rare specimens of some kind, when his collection may be doubled in value by the addition of a single specimen which renders it complete—people are not willing to pay so much for a given small addition to their store of any commodity when they already have a large amount of it, as when they have but little; this enables us to say at once that the demand curve must slope downwards throughout, whatever be its shape in other respects.

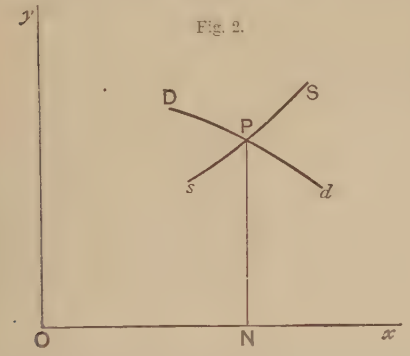
With regard to the supply curve, it is quite possible that its slope should be sometimes upwards, sometimes downwards, or that it may be horizontal throughout or for a portion of its length. If, however, we are considering only small changes in production, not involving a reorganisation of the industry concerned, an

increase of product means, in general, an increase in the total cost out of proportion to the addition to the amount of produce, *i.e.* in the neighbourhood of the actual price the curve slopes upward as we proceed outwards along it, though there are, doubtless, cases in which the contrary is true, and it is drawn sloping downwards in Fig. 5.

For the problem of the equilibrium of supply and demand, the use of diagrams enables us to grasp more clearly than any other method the relations between the quantities involved.

If D*d* and *s*S (Fig. 2) be portions of the curves of demand and supply intersecting at P and

Fig. 2.



PN be perpendicular to O*x*, then PN denotes a price which will equate demand and supply. At a price less than PN it would not be profitable to produce so much, at a greater price there would be more than the ordinary profit, which would lead producers to endeavour to increase their businesses. At a price greater than PN consumers would not be found for the whole amount ON, at a less price consumers would be tempted to increase their consumption, and would be desirous of using more than the amount ON.

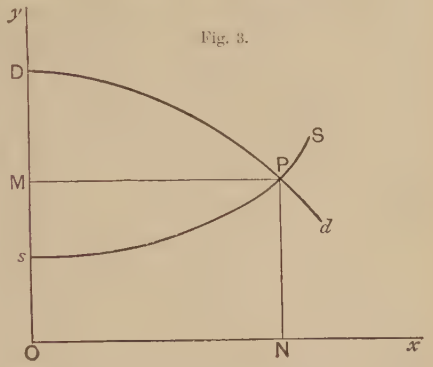
Small variations from the conditions indicated will upset the balance struck at the price PN. We see that the price, which may be taken to measure the exchange-value of the commodity, is equal on the one hand to the expenses of production at the margin, and also to the marginal demand price, *i.e.* to the estimate in money-equivalent made by purchasers, of the utility to them of those portions which they consider only just worth their outlay.

If the curves be supposed traced back to meet O*y* (see Fig. 3) we have a representation of the total utility to consumers of the quantity of commodity ON in the area between the curve D*d* and the lines OD, ON and NP.

The actual outlay being measured by OMPN (if PM be parallel to O*x*), the area DMP is what is called by Prof. Marshall the *Consumer's Rent*, being the excess of the money measure of the total utility over the money cost.

Under certain conditions the area MsP denotes the *Producer's Rent* measured in money.

Fig. 3.

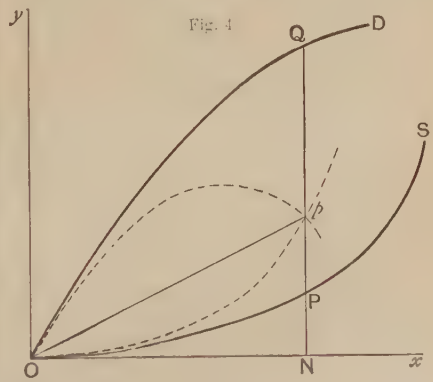


The relations expressed by these curves are represented in a different manner by Auspitz and Lieben in their work on the *Theorie des Preises*. The curves they draw have for ordinates the prices, not of a unit, or given quantity, but of the total quantities represented by the corresponding abscissæ.

The price, in the ordinary sense of the term, is represented by the trigonometrical tangent of the angle between the line touching the curve at any point and the line O*x*, for it is the rate at which the total price increases as the amount increases.

Lines being drawn from O parallel to the tangents at every point to the total cost curve OS to intersect the corresponding ordinates, a second curve is deduced (the dotted curves in Fig. 4). A similar construction applied to the

Fig. 4



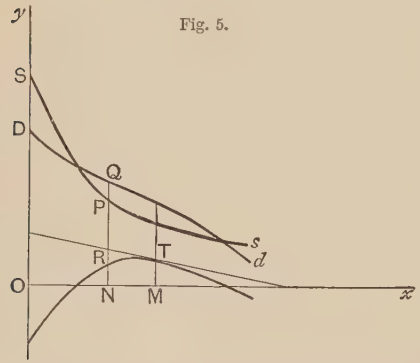
total demand curve gives a second derived (dotted) curve, whose intersection with the former at *p* gives the position of equilibrium of supply and demand and the normal exchange value. ON is the amount produced and consumed, and the price at which a unit of it is saleable is represented by the ratio of PN to ON.

Among the many diagrams expressing the

relations between different economic quantities, one of the most instructive is that which deals with the case of *Monopolies*.

Assuming the ordinary supply and demand curves for a commodity the sources of supply of which are monopolised, we deduce from these a third by measuring along each ordinate NPQ to the supply and demand curves a portion NR equal to the part PQ between the two curves. Where the demand curve lies above the supply curve the distance NR is measured

Fig. 5.



upwards and *vice versa*. This curve (Fig. 5) represents the possible profit obtainable with different amounts of the given commodity produced. The aim of the monopolist being supposed to be to make the total gain as great as possible, the scale of production suitable is that denoted by OM when, MT being drawn parallel to O*y* to meet the curve at T, the part of the tangent at T to the third curve, which is cut off by O*x* and O*y*, is just divided equally at T. In this case the product of OM and MT, which expresses the total profit, is greater than for any other position of T upon the curve RT, and thus the condition laid down is satisfied. For any other scale of production, either the lessened rate of profit out-balances the increased sales, or the decrease of sales out-balances the increased rate of profit. Many developments of the diagrams here referred to may be found in the footnotes in bks. iii. iv. and v. of Marshall's *Principles of Economics*, and the examples given will, it is hoped, be sufficient to illustrate the general ideas which underlie most of the diagrams in general use. A. W. F.

DIALOGUS DE SCACCARIO. This notable treatise was written about 1176 by Richard Fitz-Nigel, Bishop of London, at one time treasurer of the exchequer. It is in the form of a dialogue between a master and a disciple, and consists of two books. The first book describes the exchequer, and its two parts: the lower, or receipt, to which money is actually paid by the sheriffs and other officials, and the upper, in which the accounts are formally audited. It also describes the functions of the justiciar, chancellor, treasurer, and other officers of the exchequer. The second book describes the summonses to the exchequer, and the various sources from which the revenue is derived. Besides the direct information about the financial administration of the Angevin period, the treatise also throws a flood of light on the history of constitutional and social organisation from the Norman conquest to Henry II.

The *Dialogus* was "translated into English by a gentleman of the Inner Temple," 1758, also in *Historical Documents of the Middle Ages* (Bohn). It is printed in Madox, *History of the Exchequer*. Stubbs, *Select Charters* gives the complete Latin text. See also Hubert Hall, *Court Life under the Plantagenets*, chs. viii. and ix., and F. Liebermann, *Einleitung in den Dialogus*. R. L.

DICA. A kind of tally used for checking the receipt or issue, not of money, but of household provisions, farm produce, and even merchandise. In the statutes of the order of Sempringham it is provided that all seed issued out of the grange shall be checked by a *dica*, to be divided into two halves, of which one shall be kept by the warden and the other by the granger. In the *Constitution of the King's House*, a treatise probably as old as the reign of Henry I., the master marshal of the king's house was to have *dicæ* against all the king's officers. From this it appears that the use of tallies for public accounts originated with this regulation for the king's Chamber, and we know that the early name of the Exchequer or treasury sessions was "the Tallies," the revenue being at that time rendered in farm produce (*Dial.* i. 8). The same meaning is probably contained in the term "diker" of leather, namely ten hides in every bale, these being tallied by the packer and owner by a notch cut at the counting of every tenth hide. In the present day coals are still "tallied" in a precisely similar way on board ship.

[*Stat. Ord. de Sempringham*, p. 478.—Pipe Roll Society, vol. iii.—*Red and Black Books of Exchequer*.] H. Ha.

DICKINSON, John (1732-1808), a native of Maryland, came to London to study law, and was called to the bar at the Middle Temple. After his return to America he distinguished himself by a pamphlet (1765) entitled *The Late Regulations respecting the British Colonies on the Continent of America considered*, in which he showed the economic unwisdom of the Sugar Act and the proposed Stamp Act. His *Letters from a Farmer in Pennsylvania to the Inhabitants of the British Colonies*, 1768, deny the assumed authority of the British parliament to tax the colonies. They examine the claim upon historical, constitutional, and legal grounds; and the argument, though studiously moderate in tone and closely reasoned, is stated in such a lucid and captivating manner that the *Letters* obtained a

very wide circulation. Dickinson was an intellectual factor of the first importance in founding the Independence of the United States, and drafted some of the principal state papers of the time. He was elected president of Delaware in 1781, and of Pennsylvania in 1782.

"The Historical Society of Pennsylvania proposes to print a more complete edition of his political writings than that which was published under his own supervision at Wilmington in 1801." *The Life and Times of John Dickinson*, by Charles J. Stillé, LL.D., Philadelphia, 1891.

H. H.

DICKSON, Rev. Adam (1721-1776), was born at Aberlady, East Lothian. He graduated at Edinburgh University and was appointed minister at Dunse, Berwickshire, in 1750. He was transferred to Whittinghame in East Lothian in 1769, and died in consequence of a fall while riding.

Dickson gave much attention to agriculture, and published in 1762 a *Treatise on Agriculture* (new ed. 1770, 2 vols. 8vo), with special reference to the soil and climate of Scotland. One section, *On Manures*, directed against Tull, was reprinted in A. Hunter's *Georgical Essays* (vol. iii., 1770). He also wrote *Small Farms destructive to the Country in its Present Situation*, 1764, and *An Essay on the Causes of the Present High Price of Provisions*, etc., 1773, 4to. In this pamphlet he contended that high prices were not due to bad crops but that they were connected with luxury, currency, taxes, and the national debt. Among other remedies he proposed road-making, ox-labour, a tax on stockholders, and an export duty on corn. Dickson is best known for his *Husbandry of the Ancients* (1788, 2 vols. 8vo, French translation by Pâris, 1802), derived from the "Scriptores rei rusticæ" and other writers, and compared with the modern system. His practical knowledge enabled him to clear up many difficulties, but his scholarship was imperfect (Smith, *Dict. of Antiquities*, 1890, i. 83).

[Biography prefixed to *Husbandry of Ancients*, 1788, vol. i.—*Dictionary of Nat. Biography*, xv. 38.] H. R. T.

DIDEROT, Denis (1713-1784), in his relation to Economics. There is hardly a single branch of science which does not owe some kind of gratitude to the universal genius of this very able and characteristic French writer. His suggestive mind, his common sense, and his power of concentrating the best thoughts of his contemporaries into one focus, naturally extended themselves to the narrow ground, as it was in his day, of political and economic science. It is almost impossible to state how far in this respect Diderot could lay claim to originality. He is known to have written many passages in the most celebrated works of his time. Rousseau confessedly studied his style, and some striking pages in his *Discours sur l'Inégalité* and in Holbach's *Système de la Nature* are written by Diderot; his keen wit in conjunction with that of Galiani produced the *Dialogues sur le commerce des bleds*. It was, however, his connection with the great *Encyclopédie* (1751-1771) which brought him into closer contact with students of economic phenomena, and which also led him to promote and animate their work. The principles of mercantilism, like Forbonnais' *Éléments du Commerce*, as well as the first drafts of the economic system of the physiocrats, Quesnay, Morellet, St. Lambert, Leroy, and in part those of Turgot, are embodied in this vast enterprise. Diderot, who perhaps became acquainted with Quesnay's studies through a mutual friend, Leroy, and had publicly, in 1748, paid homage to Quesnay as a first-rate surgeon (*Œuvres*, t. ix. p. 214), did not blindly follow the track of his school. Perhaps on account of the withdrawal of Quesnay's co-operation in 1757, when the *Encyclopédie* was suppressed, their relations grew colder. Diderot preserved an independent attitude, declaring for instance in 1769 that he "did not approve the opinions of the *Quesnelistes*, but on account of their sincerity held them to be good fellows who did their best" (*Œuvres*, t. iv. pp. 80-85). Similar opinions may be found in the *Réfutation suivie de l'ouvrage d'Helvétius intitulé L'Homme*, (*Œuvres*, t. ii. p. 352), and in Diderot's recommendation of economic instruction in the Russian universities, made to Catherine II. in 1775-1776 (*Œuvres*, t. iii. p. 491). We even owe to him the knowledge of a humble outsider of the physiocratic school—Boesnier de l'Orme, whose anonymous book *Du Rétablissement de l'Impôt dans son Ordre Naturel* (Yverdun, 1769) has been ably criticised by Diderot (*Œuvres*, t. iv. p. 39); see on this book also *Éphémerides du Citoyen*, 1769, t. vi. pp. 255-256, t. viii. pp. 136-163.

Diderot's own contributions towards the *Encyclopédie* bear the features of the different influences of his time, and sometimes of a slight trace of mercantilist views; he often, with a keen instinct, adopts the attitude of his physiocratic friends, without participating in their extravagances; not seldom one might be inclined to ascribe him an anticipation of modern social thought. His articles, moreover, are interesting as exhibiting the vast difference between economic ideas and even terms used nowadays and at the time of their formation. This may be illustrated by the following extracts:

Agriculture (*Œuvres*, t. xiii. pp. 243-265) contains a history of ancient and mediæval agriculture, instructions for husbandmen for each month in the year, and describes the new English agricultural system of Jethro Tull, as interpreted by Duhamel du Monceau (*q.v.*) *Artisan* (p. 373), a man who is engaged in the mechanical work that needs the least intelligence. *Balanciers* (p. 408), gives a description of the rules of the corporation of makers of weights and scales, and their supervision by the

Cour des monnaies. The different meanings of the terms, *Bénéfice, Gain, Profit, Lucre, Emolument* (p. 425), of *Besoin, Nécessité, Indigence, Pauvreté, Disette* (p. 478) are explained. *Besoin* (p. 427) is described as comprising the appetites of the body and the desires of the mind; its tendency is to lead primitive man on the one hand to a system of associated life, on the other by the development of artificial wants to bring about the dissolution of society. The articles *Boucher* (p. 489) and *Boulanger* (p. 498) contain an account of the regulations, apprenticeships, etc. of the butchers' and bakers' corporations. In *Brut* (p. 513) raw-produce is distinguished from the finished article. *Change* (t. xiv. p. 85) is said to relate to the barter of movables, *échange* to an estate, etc., *permutation* to ecclesiastical dignities. "There are few exchanges, in which absolutely good faith is preserved; generally the two parties seek to deceive each other." *Chemins* (p. 116) is a history of highway administration in Europe. *Co-opérateur* (p. 225): "this term is much more frequently used in theological matters than in any other." Almost the same moral significance is attached to the word *Crédit* (p. 240), in which reference is only made to the work of Duclos, *Considérations sur les Mœurs.* A vindication of the natural rights of mankind is contained in *Droit Naturel* (p. 296). The study of the rules of husbandry is recommended in an article on *Économie Rustique* (p. 378). (*Fondation*, although inserted in *Œuvres*, t. xv. p. 12, is by Turgot, see the *Encyclopédie*, 1757, t. vii. p. 14). *Homme* (*Politique*, t. xv. p. 139) the pith of this article is derived from an article by Quesnay, which the latter had suppressed. The existence of this was recently discovered by Dr. S. Bauer. "The wealth of a nation is the produce of the sum total of its labours, after the cost of labour has been deducted. The greater the net produce and the more equal its distribution, the better the administration. As long as there is land lying waste, a man is employed to disadvantage in manufacture. The number of domestic servants, and of producers of luxuries, should be diminished. The maxim that an increase of comfort among the agricultural classes would remove a spur to industry is the saying of an ignorant and malignant man. The hope of living the life that a man longs for, urges him to his particular occupation," etc. *Honoraire* (p. 140) a term used for the remuneration of liberal professions, *appointements* for all posts, *gage* for servants, *gage* for soldiers, *salaire* for working men. *Hôpital* (*ibid.*), deals with the administration of almshouses and hospitals. In this article, to quote Morley, "Diderot struck a keynote of difference between the old Catholic spirit and the new social spirit." "It would be far more important to work at the prevention of misery than to multiply places of refuge for the miserable." The spirit of Rousseau seems to have inspired the following article: *Indigent* (p. 204), "a man who, wanting the necessaries of life, exists in the midst of his fellow-citizens, who exult over him with insolent luxury, rioting in the enjoyment of all possible superfluities. Indigence is not a vice, it is worse than that. There are none indigent among savages." A modern line of thought pervades the notice of *Journalier* (p. 314). "This class of man forms the greater part of a nation; a good government ought to keep his lot principally in view. Whenever the day labourer is miserable, the nation is miserable." The eulogy of competition is contained in *Laborieux* (p. 406), "Name a price, and competition will ensue; taxes and despotic government annihilate industry by rendering their fruits uncertain." *Laboureur* (*Économie Rustique*, p. 407) again brings back reminiscences of Quesnay: "Unhappy the nation in which the farmers are poor, for agriculture greatly needs improvement. Wherever the corn trade is restricted, the reduction of price falls heavily upon the cultivators of the soil; arbitrary taxes, moreover, reduce their earnings and obstruct the flow of national revenue." Like Rousseau, in the article *Législateur* (p. 427) he admonishes princes to visit the houses of the labouring poor, and pleads in *Législation* (p. 436), for the simplest legislation and the system the most consonant to nature, by which the passions of men should not only be curbed, but directed to advancing both private and public interest. The legislator must take care that the expenses of associated life shall fall upon the rich, who enjoy the corresponding advantages (see Morley's *Diderot*, vol. i. p. 243-246). In the article, *Luxe* (*Morale et Philosophie*, vol. xvi. p. 5), Diderot displays his utmost ingenuity. After having refuted by historical examples all sweeping propositions for and against luxury, he explains it to be a natural outcome of civilisation and not a necessary cause of the decline of empires. Luxury must be in proportion to the general production. "There was more luxury in the years of magnificence of Louis XIV.'s reign than in 1720, and in 1720 this luxury was more excessive." Luxury turns away attention from agriculture, and the privileges granted to the producers of luxuries create an artificial irregularity of distribution; luxury easily escapes taxation, and the "nouveaux riches," indulging in it, demoralise society. The remedies against luxury consist in its gradual diffusion, and in the abolition of its privileges. The article closes with the admirable sentence: "Je prie les lecteurs de se dépouiller également des préjugés de Sparte et de Sybaris; et dans l'application qu'ils pourraient faire, à leur siècle ou à leur nation, de quelques traits répandus dans cet ouvrage, je les prie de vouloir bien, ainsi que moi, voir leur nation et leur siècle sans des préventions trop ou trop peu favorables, et sans enthousiasme, comme sans humeur" (p. 30). Modern ideas and Rousseauism are intermingled in *Misère* (p. 119), "The poor common people are incredibly stupid. I know not what false prepossession closes their eyes to their present wretchedness, and to the still deeper wretchedness that awaits their years of old age. Misery is the mother of crime. It is rulers who make men miserable, and it is they who shall answer in this world and the next for the crimes that misery has caused." He remarks in the same spirit on *Opulence* (p. 171), "It is but seldom that this does not augment the natural malignity of mankind, and that it increases happiness." *Propriété* (p. 439) is shown to be a condition of security—security

was the aim of men in forming societies; taxes the means to uphold them. Where a king pretends to be the sole proprietor of the goods of his subjects, anybody may become king by force. *Prostituée* (p. 440) is explained almost only in the figurative sense as applied to mercenary writers. In *Représentants* the usefulness of representatives of the "nation" in the way of advising the king are explained. All "citoyens" ought to choose men as representatives, who are qualified to be so by reason of their property or their knowledge of the interests of the people. Members from the ranks of the clergy, the nobility, the magistracy, merchants and cultivators of the soil, should be chosen for these assemblies. Diderot's opinions, one sees, are on this point more akin to the doctrines of the physiocrats, and to those of continental liberalism, than to those of modern democracy. The article on *Souverains* (p. 166) does not go beyond the current theory of social contract and renunciation of natural rights. In *Société* (p. 130) Diderot proclaims the principle of seeking the common good of all, not only as the supreme, but as the universal rule of conduct.

After the completion of the *Encyclopédie*, Diderot wrote some pamphlets which evince his unceasing interest in free enterprise. In the *Lettre historique et politique adressée à un Magistrat sur le Commerce de la Librairie*, 1767 (*Œuvres*, t. xviii. p. 7) he admits that "he would consider the entire and absolute abolition of corporations as a step towards a wiser government." Three are many strikingly characteristic remarks on commercial and economic life in his *Voyage de Hollande*, 1774 (*Œuvres*, t. xvii. pp. 406-468). There are besides in his *Fragments politiques* scattered ideas about the dangers of a sudden influx of the precious metals (*ibid.* t. iv. pp. 41-50). His work *Mon père et moi* concludes with an idea of statistics of the distribution of income, and the postulate of exempting the physical necessary from taxation (pp. 481-482). A highly curious anticipation of the modern labour question, as exemplified by the condition of the miners of Saxony, is contained in the *Réfutation suivie de l'ouvrage d'Helvétius intitulé L'Homme*, 1774-1775 (*Œuvres*, t. ii. pp. 430-431).

[The passages above referred to are quoted from the *Œuvres complètes de Diderot*, edited by J. Assézat et M. Tourneux, 1875-77, 20 vols.; also Rosenkranz, *Diderot* (1866)—Morley, *Diderot and the Encyclopœdists*, 2 vols., 1878, 1891, especially vol. i. pp. 177-247.—Du Bois-Reymond, *Zu Diderot's Gedächtniss*, 1884.] S. B.

DIETERICI, Karl Friedrich Wilhelm (1790-1859), a great name in statistics, was born in Berlin, served under Blücher in the Napoleonic war, held several public appointments—the post of professor of political economy (für Staatswissenschaft) from 1834, that of director of the statistical bureau in Berlin from 1844—and died in his native city. His virtues and amiable character are attested by his successor Engel (*Report of the International Statistical Congress at London*, 1860, p. 43) and others who speak from personal knowledge.

Both in the spheres of political economy and statistics, especially the latter, Dieterici was eminent. In his inaugural professorial letter *De viâ et ratione œconomiam politicam docendi* he distinguishes the different methods of cultivating the science—the philosophical, the juristical, the historical ("Est *historica* via œconomiam politicam docendi," written in 1835); the political or statistical method, of which Humboldt is given as an instance *qui quantum auri et argenti ex America in Europam allatum sit, quantum theæ consumatur, aliaque similia accurate . . . explicavit*; the technological method, which J. G. Büsch and Ricardo have followed, both praised for their attention to facts and experience. The true method is compound: *et mere philosophando et mere experiendo erratur.* Dieterici promises to unite theory and experience. The facts are perhaps more interesting than the theory in his most ambitious contribution to economics, *On Overpopulation* (*Über den Begriff der Übervölkerung*, Akademie der Wissenschaften in Berlin; März, 1849). True to facts, *experientiâ maxime fretus* as he promised, Dieterici enriched many departments of statistics. His memoir on the *Mean Duration of Life* (*Über den Begriff der mittleren Lebensdauer und deren Berechnung für den preussischen Staat*, Akademie der Wissenschaften in Berlin, December 1858) may be noticed among many other valuable contributions to vital statistics, which will be found among the following references.

Die Waldenser und ihre Verhältnisse zum Brandenburgisch-preussischen Staate (1831).—*Geschichtliche und statistische Uebersicht der Universitäten im preussischen Staate* (1836).—*Statistische Uebersicht der wichtigsten Gegenstände des Verkehrs und Verbrauchs im preussischen Staate und im deutschen Zollverbande . . .* (1838-1857).—Statistischen Tabellen des preussischen Staats nach der amtlichen Aufnahme des Jahres 1843.—*Uebersicht der Bodenfläche der Bevölkerung und des Viehstandes der einzelnen Kreise des preussischen Staats* (1845).—*Die Bevölkerung des preussischen Staats nach der amtlichen Aufnahme des Jahres* 1846 (1848).—*Der Volkswohlstand im preussischen Staate . . .* (1846).—*Ueber Auswanderungen und Einwanderungen* (1847).—*Ueber preussische Zustände über Arbeit und Kapital* (1848).—*Gedächtnissrede* (in honour of Fred. William III.), 1852.—*Handbuch der Statistik des preussischen Staats* (1858-61).—Much of Dieterici's work is contained in the periodical which he edited from 1848 till his death—*Mittheilungen des Statistischen Bureau's in Berlin.* The fourth volume for 1851 contains the valuable essay *Ueber den Begriff der Statistik.* [*Allgemeine Deutsche Biographie.*—Reports of the first four international statistical congresses, *passim.*]

F. Y. E.

DIFFERENTIAL DUTIES. See Discriminating Duties.

DIFFICULTY OF ATTAINMENT is a phrase used by De Quincey, Mill, and others, to denote a condition which must be superadded

to utility in order that there should exist value in exchange. "Any article whatever, to obtain that artificial sort of value which is meant by exchange value, must begin by offering itself as a means to some desirable purpose; and secondly, even though possessing incontestably this preliminary advantage, it will never ascend to an exchange value in cases where it can be obtained gratuitously and without effort" (De Quincey, *Logic of Political Economy*, p. 13; quoted by Mill, *Pol. Econ.*, bk. iii. ch. ii. § 1). The difficulty of attainment here indicated is primarily that which is experienced by the purchaser. But it is usual to extend the term to the difficulty experienced by the producer. Thus De Quincey continues: "Walk into almost any possible shop, buy the first article you see; what will determine its price? In the ninety-nine cases out of a hundred simply . . . difficulty of attainment. . . . If the difficulty of producing it be only worth one guinea, one guinea is the price which it will bear." So Mill, of what he considers the general case, "the obstacle to attainment consists only in the labour and expense necessary to produce the commodity" (*loc. cit.*, § 2). And by others difficulty of attainment is used as equivalent to cost of production. Thus Walker (*First Lesson in Political Economy*, Art. 67), "Cost of production is only another name for difficulty of attainment." This transition from the sense in which the difficulty, like the other factor utility, is experienced by the individual purchaser is legitimate, where there exists such perfect "industrial" Competition that it is free to any one to enter any occupation. In that case the sacrifice made to attain a commodity by purchase tends to be equivalent to the efforts and sacrifices made in attaining it by production. If the value in exchange were higher, the commodity would not be purchased; if lower, it would not be produced.

The wider conception is particularly appropriate to the case which Mill, dividing the different kinds of difficulty, places second; where, "without a certain labour and expense it [the commodity] cannot be had; but, when any one is willing to incur this, there needs be no limit to the multiplication of the product" . . . up to a point which there is no need, for practical purposes, to contemplate (*Pol. Econ.*, bk. iii. ch. ii. § 1). In this case difficulty of production has a certain pre-eminence over the co-factor utility, both as (*a*) a cause, and (*b*) a measure of value. (*a*) The cause of a phenomenon being usually a somewhat arbitrarily selected portion of its total antecedent (Mill, *Logic*, bk. iii. ch. v. § 3; Venn, *Empirical Logic*, p. 57 *et seq.*), it is not paradoxical that sometimes utility, sometimes cost, should be regarded as the cause of value. Utility indeed is invariably an antecedent. But the scale of utility (see DEMAND CURVES), may, in the case supposed, be varied without any variation of value. "If the demand for hats should be doubled, the price would immediately rise; but that rise would be only temporary, unless the cost of production of hats . . . were raised" (Ricardo, *Pol. Econ.*, ch. xxx.) Whereas, if the cost of production of an article is varied, its value varies concomitantly. "Diminish the cost of production of hats, and their price will ultimately fall to their new natural price, although the demand should be doubled, trebled, or quadrupled" (Ricardo, *ibid.*) Prediction, the prerogative of causation, is attached to cost rather than utility. (*b*) Accordingly, in the case supposed, the comparative difficulty of producing two commodities affords a simple measure of their relative value. It is true also that value is proportioned to final utility. But this measure cannot be read until the measurement is already given. We cannot tell what the final utilities will be till we know the values. In some cases indeed (see below (4) and (5)) it is conceivable that, given the dispositions, the Demand-Curves of all the dealers in a market, we could deduce the rate of exchange which will be set up. The calculation is indicated by Professor Walras in his *Éléments d'Économie Politique Pure*, Art. 50. Still difficulty of production, in the case most favourable to its operation, measures value directly, as a clock measures time; whereas utility at best is a measure like the shadow cast by the sun, which can only be interpreted by a difficult calculation.

This theory is subject to several reservations and exceptions. (1) The pre-eminence of difficulty of production as a regulator of value depends largely on the assumption that labour is perfectly homogeneous. If all labour consisted of raising weights in precisely similar circumstances, the theory might be literally true. "If . . . it usually cost twice the labour to kill a beaver which it does to kill a deer, one beaver should naturally exchange for or be worth two deer" (Adam Smith, quoted by Ricardo), there being only one mode of labour, work being as homogeneous as, say, gold. But suppose, besides effort of exertion, the sacrifice of waiting is required. Then, as between commodities involving these elements in different proportions (cp. Ricardo, ch. i. § 4), it would no longer be possible to assign the rate of exchange between the commodities without being given the comparative remuneration for the two kinds of sacrifice. But this datum could not in general be obtained *a priori*, but only as a result of the higgling of the market.[1] Now, in fact, there

[1] This reservation holds even upon the imaginary supposition that there existed a competition so perfect that it is free to any one to choose whether he will labour or abstain, *a fortiori*, when, as in reality the abstainers form a "non-competing group"; and so fall under head (3).

are not only two, but many, kinds of sacrifice. The general principle is that the "net advantages" (Marshall, *Principles of Economics*, vol. i. 2nd ed. p. 136) in occupations between which there is "industrial competition" (Cairnes), tend to be equal. Accordingly the statement that the "quantity of labour realised in commodities" (Ricardo) regulates their exchangeable value, can be true only on an average with wide deviations. Take the case put by De Quincey of a pearl-diver who sometimes obtains, along with "ordinary," superior pearls. The true principle is that the net advantages of pearl-diving are the same as those of any other occupations between which there is industrial competition. How much truth is there in the proposition that the value of any pearl is proportioned to the "quantity of labour realised" in it? The instance taken is a mild case of plural occupations, or joint production (see BY-PRODUCT). The application of the general principle of net advantages here affords little light as to the value of particular articles (cp. Sidgwick, *Pol. Econ.*, bk. ii. ch. ii. § 10).

(2) The pre-eminence of difficulty over utility, as a regulator of value, disappears altogether when we pass from Mill's second case to a category comprising both Mill's third case (*Pol. Econ.*, bk. iii. ch. ii. § 2), in which the cost of production increases with the quantity produced, according to the law of DIMINISHING RETURNS (*q.v.*), and the converse case, in which the cost of production diminishes with the quantity produced according to the law of INCREASING RETURNS (*q.v.*) In this case the two factors, utility and value, become co-ordinate. As Professor Marshall says (*Economics of Industry*, 1st ed. p. 148), "the amount produced and its normal value are to be regarded as determined simultaneously under the action of economic laws. It is then incorrect to say, as Ricardo did, that cost of production alone determines values; but it is no less incorrect to make utility alone, as others have done, the basis of value." With reference to what Jevons calls the "mechanics of industry" it seems trifling to inquire whether the force or the resistance contributes more to the determination of equilibrium. The *simultaneousness* of the two conditions is indicated by Jevons in his discussion of cost of production (*Theory*, ch. v.) Jevons there entertains the unreal conception that it is free to the producer to apply his efforts in "doses" to different kinds of production. This at most is true of the mere inventor as distinguished from the *entrepreneur* and operative. Still the conception may be usefully employed as symbolical of the actual working of competition in a regime of division of labour (Pantaleoni, *Principii. Theorema di Ricardo ed Marshall*). The simultaneousness of the two conditions may best be shown by imagining the disutility, as well as the utility, to be of the sort called "final" (see MATHEMATICAL METHOD).

(3) The co-ordinateness of difficulty of production with utility disappears when industrial competition is no longer supposed. In this case the assumed equation between the purchaser's and the producer's difficulty of attainment fails. The typical instance is international trade. There is no correspondence between the efforts of the Chinese producer of tea and the sacrifices which the English purchaser incurs to obtain it. It is pointed out by Cairnes that the principle of international trade governs domestic industry where "non-competing groups" exist. With reference to this case, as well as the preceding, Dr. Sidgwick justly says: "It is not merely inconsistent with facts but with other parts of Mill's teaching, to say broadly that 'the value of things which can be increased at pleasure does not depend . . . upon demand'" (*Pol. Econ.*, bk. ii. ch. ii. § 9). In this case the value of an article is proportioned to its final utility for the purchaser in the same sense as in the preceding cases. But it is not proportioned to the difficulty of attainment in the same sense.

(4) The co-ordinateness of difficulty of production with utility is not even supposable, when we pass to another category, Mill's first: "things of which it is physically impossible to increase the quantity beyond certain narrow limits;" such as "ancient sculptures" . . . "rare books or coins" . . . "houses and building-ground in a town of definite extent," and "potentially all land whatever" (*Pol. Econ.*, bk. iii. ch. ii. § 2).

(5) With Mill's first class go those commodities which are temporarily "unsusceptible of increase of supply" (*ibid.* § 5); in short all cases of Market as distinguished from Normal Value (see VALUE).

(6) Lastly, all cases of monopoly must be excepted from the sphere within which the difficulty of attainment experienced by the purchaser is equateable with the difficulty of production. Outside this sphere the difficulty experienced by the purchaser is due to the niggardliness of his fellow-man, rather than the stubbornness of nature; and is measured only by his own reluctance to part with some useful commodity, and not also by his (potential) effort in producing the article purchased.

It is easier to refine upon these logical distinctions than to prove what is the relative extent and importance of the categories defined; which conception, if any, may be taken as typical of the facts. This is a matter of judgment rather than demonstration; about which there is much disagreement between economists of the last and the present generation. The case which one treats as the general rule, another treats as exceptional or non-existent. Mill speaks of his second category as "embrac-

ing the majority of all things that are bought and sold" (*P. E.*, bk. iii. ch. ii. § 2). To the same effect Ricardo on the very first page of his *Principles*. The reservations which are here indicated under heading (1) are waived by Ricardo. Of the effect of the rate of profits on value he says, "the reader" however should remark that this cause of the variation of commodities is comparatively slight in its effects" (*ibid.* ch. i. § iv.) The difficulties caused by the difference in the qualities of labour he dismisses in a few sentences (ch. i.) The extreme recoil from Ricardo's position is marked by the AUSTRIAN SCHOOL (*q.v.*), who emphasise utility as the determining principle of value, and assign quite a secondary place to Cost. See especially Professor Wieser, *Ueber den Ursprung . . . des wirthschaftlichen Werths;* and Dr. Böhm-Bawerk, *Kapital und Kapitalzins*, interpreted by Mr. James Bonar in the *Quarterly Journal of Economics*, October 1888, January 1889. In this attitude they had been anticipated by Jevons. But Jevons, as has been shown, admitted cost of production as a simultaneous factor. The simultaneousness of the two conditions in a regime of industrial competition has been defended by the present writer in the *Revue d'Économie Politique* for October 1890. In fine there are those who regard all abstract theory as futile (see the HISTORICAL SCHOOL). CLIFFE LESLIE and HELD (*q.v.*), Brentano and others, harp on the unreality of the Ricardian assumptions. Neumann's article on prices in Schönberg's *Handbuch* teems with cases which it is difficult to reconcile with any theory of the relation between value and difficulty of attainment. F. Y. E.

DIFFUSION THEORY OF TAXATION. This is the name given (*e.g.* by Mr. F. A. Walker, *Pol. Econ.*, § 485) to the theory that the individuals from whom a tax on a particular kind of commodity, exchange, or occupation, is actually levied do not ultimately bear the burden, but shift it on to other classes, so that the tax is "diffused" or spread over a large area (see TAXATION). E. C.

DIGGES, SIR DUDLEY (1583-1639), director of the East India Company, was one of the ablest defenders of that society. The loss, near Bantam, in 1613, of the *Trades Increase*, gave rise to an anonymous pamphlet (the *Trades Increase*, by J. R., Lond., 1615) in which the author, while strongly objecting to all the then existing trading companies (see FOREIGN TRADE, REGULATION OF), made an especially violent attack on the East India Company, to whom that vessel belonged. He accused them of restricting the supply of East India commodities and of other objectionable practices, and maintained that their trade led to the diminution of the naval strength of the kingdom. The Company wished to prosecute the author in the Star Chamber, as some parts of the book were held to be "very near to treason and all the rest very dangerous." (*Court Minutes*, 22nd Feb. 1615). Sir Dudley Digges, however, was of opinion that a book should be put forth refuting the charges brought against the Company. He accordingly published *The Defence of Trade: in a letter to Sir Thomas Smith, Knight, Governor of the East India Company*, From one of that Society, Lond., 1615. In this pamphlet he replied to the objections to the Company which were based upon the risks of the trade, the frequent loss of ships and men, and the consequent decrease of the naval strength of the country. He also maintained that the East India trade "increased the stock of the kingdom" (p. 43), and pointed out the fall in the prices of East India goods since the formation of the Company.

[State Papers Colonial (East Indies) 1610-15 *passim*. For full details of the life of Sir Dudley Digges, vide *Dict. Nat. Biog.*] W. A. S. H.

DILIGENCE (Scot.) (1) Care in regard to the subject-matter of a contract; (2) the procedure of the court whereby witnesses are made to attend or documents caused to be produced; (3) attachment of person or property at the instance of creditors to enforce satisfaction of a debt or obligation. A. D.

In English business phraseology *due diligence* is an expression denoting the care which persons who have undertaken certain duties with reference to the performance of work or the custody of goods must bestow on such work or such custody. The amount of care to be given depends on the nature of the contract. When a reward is given or promised, such "care and diligence are expected as are exercised in the ordinary and proper course of similar business, and such skill" as the person who undertook the work or the custody "ought to have, namely, the skill usual and requisite in the business for which he receives payment." When no reward is given or promised, the care usually given to one's own affairs is sufficient. E. S.

DILIGENTIA. Expression of Roman law for the care which was required in certain relations created by contract or otherwise. The degree of diligence required varied according to the circumstances of the case. Sometimes it was sufficient to give the care which the person concerned gives to his own affairs ("dil. quam suis rebus adhibere solet"); sometimes the diligence of a careful householder ("dil. boni patrisfamilias") was necessary. E. S.

DIME. United States silver token coin; nominal value ten cents. First struck in 1796, weight 41·6 grains, fineness 892·4. Altered in 1837 to weight 41·25 grains, fineness 900. Weight again reduced in 1853 to 38·4 grains, and fixed in 1873 at 38·58 grains. English standard value (silver 925 fine at 5s. 6d. an ounce) 5·16d. Value in silver francs, 900 fine, ·5 franc. F. E. A.

DÎME ROYALE. In 1707, at the most disastrous period of the war of the Spanish Succession, the famous Marshal Vauban published his *Projet d'une dîme royale*, which remains the most memorable contemporary impeachment of the French financial system under the monarchy. In his engineering tours about France, Vauban had carefully studied the condition of the agricultural classes, and had arrived at the most gloomy conclusions. "One-tenth of the people has fallen in recent years into beggary; five other tenths cannot afford an alms to the paupers, because they are on the verge of beggary themselves; of the remaining four-tenths, three are in a bad condition, overwhelmed with debts and litigation; while of the remaining tenth barely 10,000 families can be called 'really rich.'" For this deplorable state of things the financial system is mainly responsible, and of this system the most glaring defects are the innumerable exemptions from payment and the practice of farming out the taxes, by which the great capitalists make a fortune at the expense of the people. Vauban reckoned no less than eighteen classes of persons who were exempt from the *taille* and other taxes. The exemptions were due in great measure to the practice of selling offices, which had grown up in the 15th century. To make them valuable, the monarchy had parted with the right of removal, thus losing control over its own servants. When they could no longer be trusted, their functions were given to a new set of officials: these in their turn bought their places, became useless, and were superseded by new agents. The result was the existence in France of an enormous number of useless officials, while the real work was done by the intendants and their agents. An office without functions was worth buying, because it freed its holder from direct taxation. Thus the sale of offices created a vast disguised public debt, the amount of which was as difficult to estimate as were the ruinous terms on which it was contracted. It resulted that the contributors to direct taxation were those who could not afford to purchase exemption. The indirect taxes, the *aides* (see AIDES, COUR DES), and the *gabelle*, were as ruinous to industry, if not so glaringly unfair in their incidence, as the *taille*.

Vauban's remedy for the evils which he depicts was to abolish the existing taxes, and to substitute one single impost, levied directly upon real and personal property, from which no class was to be exempt. This *dîme royale*, etc., was to be graduated, varying from a twentieth to a tenth of income, and was to be collected directly by agents of the government. The suggestion of a reform which attacked so many vested interests, and the masterly exposure of profitable abuses, were enough to obliterate in the minds of Louis XIV. and his ministers the services of the veteran marshal, now in his seventy-fourth year. The council issued a decree ordering the book to be confiscated, and prohibiting its sale under a fine of 1000 francs. On 24th March 1707, Vauban received the news of the confiscation of his book; on the 30th he died, broken-hearted at the ingratitude of a sovereign whom he had served only too well.

The *Projet d'une dîme royale* which has frequently been published separately, may also be found in Daire, *Économistes financiers du XVIII^me^ Siècle*, vol. i. p. 33. R. L.

DIMENSIONS OF ECONOMIC QUANTITIES. A unit is a concrete magnitude selected as a standard by reference to which other magnitudes of the same kind may be compared. A derived unit is a unit determined with reference to some other unit. Thus the unit of area may be derived from the unit of length by being defined as the area of the square, erected on the unit of length. The unit of speed may be derived from the unit of length and the unit of time, by being defined as that speed at which the unit of length is traversed in the unit of time. In relation to the derived units of area and speed, the units of length and time would then be fundamental,—"fundamental" being a term correlative to "derived."

The theory of dimensions is concerned with "the laws according to which derived units vary when fundamental units are changed" (Everett). A fundamental unit, together with the magnitudes of like kind referred to it, is regarded as having one dimension. Thus a length has the dimension L. The unit of length enters twice into the unit of area, first determining the base and then the altitude of the unit rectangle, and therefore the dimensions of an area are LL, usually written L^2. If we alter the unit of length, say from a foot to an inch (1 : 12) the unit of area will be reduced in the same ratio twice successively (1 : 144 in all). The variations of the unit of area, therefore, are directly as the squares of the variations in the unit of length. The units of length and of time enter once each into the unit of speed, but they do not enter on the same footing. If the unit of time be the minute, and the unit of length the foot, the unit of speed will be a foot per minute. This unit will become smaller if we make the unit of *length* smaller, since an inch per minute is a smaller speed than a foot per minute; but it will become larger if we make the unit of *time* smaller, a foot a second being a greater speed than a foot a minute. This is expressed by saying that the dimension of time T enters *negatively* into speed. The dimensions of speed, then, are expressed as LT^{-1}. A unit into which a dimension enters negatively is always a unit of rate, and measures amount of x *per unit* of y,—y being the quantity the dimension of which enters negatively.

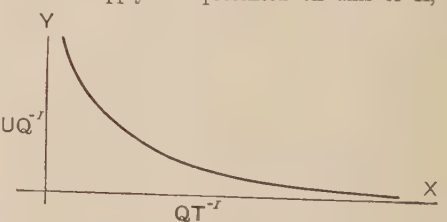
We have now examined simple cases of the variations of derived *units*, but it is obvious that the *numerical values* of concrete magnitudes vary inversely as the units by reference to which they are estimated. The smaller the unit the greater the numerical value of any given magnitude. The numerical value of a magnitude, therefore, will vary inversely as the unit whose dimension enters into it positively, and directly as the unit whose dimension enters into it negatively. Thus, let the unit of speed (dimensions LT^{-1}) be a foot per minute, and let the numerical value of a certain concrete speed be 10, *i.e.* let the speed be *ten* feet per minute. Then change the unit of length to an inch (1 : 12) and the unit of time to a second (1 : 60); the derived unit will now be an inch per second, and its relation to the former derived unit is obtained by altering directly in the ratio of 1 : 12 (dividing by 12) and inversely in the ratio of 1 : 60 (multiplying by 60), so that the new unit is five times as great as the old one, an inch per second being five times as great a speed as a foot per minute; but the numerical value of the concrete speed we had to express must be altered inversely as 1 : 12 and directly as 1 : 60, and is now only 2—*i.e.* the speed is *two* inches per second—or one-fifth of what it was before.

If we are measuring such a magnitude as feet of vertical motion per foot of horizontal motion in the path of a projectile, the dimensions will be LL^{-1} and will cancel each other. No change in the unit of length, then, will in any way affect the numerical value of this magnitude, and as no other dimension enters into it at all, it may be said to have no dimensions. Angular magnitudes, defined as ratios between arcs and radii, trigonometrical functions, and ratios generally are of this nature. They have no selected units, and their numerical values are absolute.

When the elements of the theory of dimensions have been thoroughly grasped it will be easy to apply it to economic questions; and it will be found an invaluable check in the more intricate problems of co-ordination and analysis. Thus, if the unit of value-in-use or utility be taken as fundamental, and regarded as having the dimension U, and if the commodity we are considering be taken as having the dimension Q, then DEGREE OF UTILITY (*q.v.*) of the commodity, being the rate at which satisfaction is secured per unit of *commodity* consumed, will have dimensions UQ^{-1}, and, will be readily distinguished from rate of enjoyment, accruing to the consumer, per unit of *time*, with dimensions UT^{-1}. *Price*, determined by *marginal*, or final, DEGREE OF UTILITY (*q.v.*), will have dimensions UQ^{-1} or P; and *hire*, being price per unit of time, will obviously have dimensions PT^{-1} or $UQ^{-1}T^{-1}$. When the thing hired is money and is used commercially, the utility derived from it is a commodity of like nature with itself. The dimension U then becomes Q, and the dimensions of interest (as a rate) are $QQ^{-1}T^{-1}$ or T^{-1}, which will be found on reflection and experiment to be correct.

The theory of dimensions should be applied to economics in close connection with the diagrammatic method. But of course the connection between dimensions, as now explained, and the geometrical dimensions of the diagrams is purely arbitrary. The physicist may, according to his convenience, represent the height of a projectile—a magnitude of one dimension—by a line, or by an area, and speed by a line or an inclination. So the economist may represent a magnitude measured by a complicated derived unit by a line, or a magnitude measured by a fundamental unit by an area or a solid; and if he keeps the theory of dimensions well before him he may vary his methods indefinitely without any danger of confusion. In all cases, however, the dimensions of those quantities represented by areas or solids will be compounded of the dimensions of those represented by the lines which determine them. Again, those who have any acquaintance with the elements of the calculus will see that if the equation of a curve be differentiated to x then the area of the derived curve will have the same dimensions as the ordinate of the fundamental curve; the ordinate of the derived curve will have the dimensions of the ordinates of the fundamental curve positively, and those of its abscissæ negatively; and the abscissæ of the two curves will have the same dimensions. In other words, differentiation introduces the dimensions of the variable to which we differentiate negatively, and integration introduces the dimensions of the variable to which we integrate positively.

By way of illustration take a figure, on the ordinate of which intensity of desire, or degree of utility, is represented, while supply of commodity per unit of time is measured on the abscissæ. Now imagine a third axis (of Z) perpendicular to the page, along which time is measured. Such a figure will enable us to represent all the quantities we have to deal with in an ordinary problem of consumption. Rate of supply is represented on axis of X,



dimensions QT^{-1}; degree of utility on axis of Y, dimensions UQ^{-1}; time on axis of Z, dimension T; rate of enjoyment on areas parallel to plane of axes of X and Y, dimensions $UQ^{-1}QT^{-1}$

or UT^{-1}; total enjoyment on solid figure, dimensions $UQ^{-1}QT^{-1}T$, or U; total supply on areas parallel to plane of axes of X and Z, dimensions $QT^{-1}T$, or Q, and in like manner price, hire, total sum paid, etc., may be read, and their dimensional relations seen at a glance.

[The theory of dimension was (according to Jevons, *Principles of Science*, 1887, pp. 325) first clearly stated by Joseph Fourier. He expounded it with great lucidity in his *Théorie Analytique de la Chaleur*, 1822, §§ 159-162. An excellent popular statement of the theory, as it has since been elaborated, will be found in the beginning of Prof. J. D. Everett's *C.G.S. System of Units*, 1891. Jevons was the first to suggest the application of the theory to economics (*Theory of Political Economy*, 1888, pp. 232-252), but he unfortunately fell into some apparent errors and confusions which made the suggestion barren in his hands. A criticism of his treatment of the subject and an independent working-out of his suggestion, by the writer of the present article will be found in the American *Quarterly Journal of Economics* for April 1889, pp. 297-314.] P. H. W.

DIMINISHING RETURNS. The law of diminishing returns is the name given to the proposition that increase of the population of a country, or, more strictly speaking, increase of the labour expended on a given area, tends to be accompanied by a diminution of the returns to a given amount of agricultural industry. The law, it is added, is only true after population has reached a certain degree of density, and even then improvements in the methods of production have a counteracting tendency. Its origin is to be found in the corn-law discussions of 1814 and 1815. During the great war cultivation had been extended over lands of a worse quality than those previously occupied, and the conclusion of peace threatened, unless more stringent restrictions on importation were enacted, to throw these lands out of cultivation. It was generally assumed that this would be an evil to the whole nation, and not only to the owners and cultivators of the lands in question, as it was supposed that every increase of cultivation must ultimately lower the price of corn by making it more abundant. But Malthus, in his *Observations on the Corn Laws* (1814), attributed "no inconsiderable part" of the difference between the English and the foreign price of corn to the "necessity" of cultivating the poorer lands, from which a given amount of produce is obtained by the expenditure of a larger quantity of labour than is required in raising an equal amount of produce on the better lands (p. 40). In the *Nature and Progress of Rent* (January 1815) he worked out this idea, and mentioned the opposing force of agricultural improvements, which he considered to be rarely sufficient to balance the necessity of applying to poorer land, so that "the quantity of labour and capital necessary to procure the last addition that has been made to the raw produce of a rich and advancing country is almost constantly increasing" (p. 45). Sir Edward West, in his *Essay on the Application of Capital to Land* (January or February 1815), put forward the same idea of an actual diminution of the returns to agricultural industry in order to show that the price of corn would not be lower than the price at which importation was allowed (see Corn Laws). Ricardo, in his *Essay on the Influence of a Low Price of Corn on the Profits of Stock* (February 1815), used the theory that with the increase of population the returns to agriculture diminish "independently of all improvements,"—*i.e.* supposing improvements not to take place,—as an argument against any restriction on the importation of corn. For this purpose it was not necessary to follow West and Malthus in holding that returns have generally diminished in spite of all improvements, but there can be no doubt that Ricardo did believe that improvements have only a temporary effect in retarding the diminution of returns (*Low Price*, Works, p. 377 n.; *Principles*, Works, p. 66). James Mill, in *Elements of Political Economy* (1821), insisted on an actual diminution of returns, and paid no attention to the effect of improvements in production. M'Culloch, in *Principles of Political Economy* (1825), expressed unhesitating belief in the actual diminution of returns with only temporary interruptions due to improvements (pp. 205, 277, 278, 383). This became for the time the received doctrine (see Longfield, *Lectures*, 1834-35, p. 181). But Dr. T. Chalmers in 1832 denied it, and showed, what was not then generally understood, that the bringing of new land into cultivation does not prove that an actual diminution of returns has taken place, as, owing to "improvements" or changes in human knowledge, the labour on the new land may be now as productive as the labour on the old land was before the change (*Political Economy*, in Works, vol. xix. pp. 17-24). H. C. Carey, in his *Political Economy* (1837-40), brought forward facts to show that the returns to agricultural industry, so far from diminishing, have actually increased enormously (vol. i. p. 58, iii. pp. 69, 70). J. S. Mill's teaching on the subject is not altogether consistent; sometimes he speaks as if there were no doubt that returns had increased (*e.g.* in the "Introduction" to *Pol. Econ.*) at other times as if they had with occasional interruptions steadily decreased (*Pol. Econ.*, bk. i. ch. xii. §§ 2 and 3, esp. in 1st ed., ch. xiii. § 2, bk. iv. ch. ii. § 3, ch. iii. § 5). To meet Carey's objection, advanced in *Past, Present, and Future* (1848), and in *Principles of Social Science* (1858), that, as a matter of fact, the least fertile lands are cultivated first, Mill confined the operation of the "law" to

old countries. Cairnes is probably the last writer of importance who expressed a strong belief in an actual diminution of returns (*Leading Principles*, 2nd ed. p. 119).

By the law as it is now taught (Sidgwick, *Principles*, bk. i. ch. vi. ; Marshall, *Principles of Economics*, bk. iv. ch. iii.) no suggestion of any actual diminution of the returns to agricultural industry is intended. It is merely equivalent to the proposition that in each stage of progress there is a limit beyond which the labour expended upon a given area cannot be increased without causing a diminution of returns. The position of the limit is constantly being changed by the progress of knowledge, and to say whether it has been passed in any particular case is a very difficult practical question. And even in a case where the productiveness of agricultural industry had actually diminished, it would not necessarily follow that the productiveness of all industry taken together had diminished. Diminishing returns in agriculture might be counterbalanced by increasing returns in other industries. On this point see INCREASING RETURNS.

In the older statements of the law the "diminishing return" was the return to "a given amount of labour and capital." But a given amount of labour is not always aided by the same amount of capital, and when a given amount of labour is assisted by a greater amount of capital the returns to capital may diminish without any diminution of the produce of a given amount of labour. (See J. B. Clark, "Law of Wages and Interest" in *Annals of the American Academy of Political and Social Science*, July 1890.) E. C.

[For a fuller account of the discussions of 1813 to 1815, see E. Cannan, "The Origin of the Law of Diminishing Returns" in the *Economic Journal*, March 1892.]

DIMINISHING UTILITY. See UTILITY.

DINAR (*ancient*). An Arabian gold coin weighing about sixty-six grains. It formed the circulating medium of a great part of both Asia and Africa for about twelve hundred years.

DINAR (*modern*). The equivalent of the franc in Servia (see FRANC). F. E. A.

DIODATI, DOMENICO, a Neapolitan, lived in the second half of the 18th century. He was the author of *Illustrazione delle monete che si nominano nelle Costituzioni delle Due Sicilie*, Napoli, presso Donato Campo, 1788 a book which describes the coins of Frederick II., Emperor of Germany and King of the Two Sicilies, and expresses their value in terms of money current at the author's date. It does not deal with theory, except by discussing the "three different values of money, extrinsic value, intrinsic value, and commercial value." According to Diodati the extrinsic value of a coin is the one declared by the state ; the intrinsic value, the value of the metal in it ; the commercial value, the purchasing power of a coin in terms of commercial commodities. M. P.

DIODATI, LUIGI, the younger brother of Domenico Diodati, also wrote on coins, from a wish to continue his brother's work. His competence in questions concerning coins was recognised by the government, which made him director of the Neapolitan mint. He was a great admirer of Broggia, and sent Broggia's works to the Russian court to be translated into Russian.

In his book *Dello stato presente della moneta nel Regno di Napoli e della necessità di un alzamento, con Prefazione;* Napoli, stamperia Migliaccio, 1790, and in a sequel to it: *Risposta ad alcune critiche fatte all' opera intitolata . . .* ut supra ; Napoli, 1794, Diodati discusses an abstruse point in the history of money, which he says neither De Sanctis, Serra, Turbolo, Locke, Melon, Spinelli, Galiani, nor Beccaria had explained completely, viz. the true cause why gold had disappeared in 1587 from the kingdom of Naples. The usual explanation of this fact was an excess of imports over exports, whilst it was due, according to Diodati, to the monetary reform undertaken by the other states of Italy, each of which had raised the nominal value of their coins. In conformity with this central idea of his, Diodati advises his government to raise the nominal value of money in the kingdom of Naples, so as to make it equal to that of other Italian states, and explains at great length how this alteration should be carried out—changing the money into a species of token money. The reason which Diodati gives for the elevation of the nominal value of coins in other states, and therefore for doing the same in the kingdom of Naples, consists in the rise of prices and the fall in the value of money, consequent on the discoveries of silver in America, and the impulse these supplies of metal gave to enterprise and business, whilst reducing all fixed incomes. M. P.

DIRECT TAXATION. As defined by Mill (*Principles*, bk. v. ch. ii. § 1), taxation "which is demanded from the very persons who it is intended or desired should pay it."

Mill's definition has been generally adopted (see Prof. J. S. Nicholson's Art. "Taxation," *Encyclopædia Britannica*, 9th ed.), *e.g.* by Wagner (*Handbuch*, vol. ii. p. 152), and by Fawcett (*Manual*, 5th ed., bk. iv. ch. iii.) The latter writer abbreviates the definition by the statement that "a direct tax is really paid by the person from whom it is levied."

Practical financiers, as Prof. Bastable states (*Public Finance*, bk. iii. ch. i.), "regard those taxes as direct which are levied on permanent and recurrent occasions."

M'Culloch defined a direct tax as one which is taken directly from income or capital, and Dr. Ely (*Taxation in American States and Cities*, New York, 1888, p. 69) observes that

"direct taxes are taxes on trades, including any branch of business, on permits, on property consisting of other economic goods than articles of consumption, and on income." Both these definitions would include taxes on articles of luxury such as dogs, horses, carriages, and also on successions and gifts.

In this connection Prof. Sidgwick's remark may be noted, "The common classification of taxes as direct and indirect appears . . . liable to mislead the student, by ignoring the complexity and difficulty of the problem of determining the incidence of taxation." See also TAXATION. T. H. E.

DIRECTORS, LEGAL DUTY OF. The duties and responsibilities of directors of joint-stock companies and other associations have frequently been discussed in the courts, and their position is now well defined. In the first place, a director must act strictly within the powers of the company as defined by the memorandum of association, and also within the powers entrusted to the directors by the articles, and if he expends any money or incurs any loss in consequence of transgressing such powers, he is liable to refund the amount. As regards transactions *within* such powers it has sometimes been said that directors are in the position of trustees, and attempts have been made to make their duties as stringent as those of the trustees of wills and settlements, but the courts have consistently opposed that view, and it is now well established that "if the directors apply the money of the company or exercise any of its powers in a manner which is not *ultra vires*, then a strong and clear case of misfeasance must be made out to render them liable" (*In re* Faure Electric Accumulator Company, 40 Ch. D. 141, 152); and not only is this the case, but, provided the impeached transaction is within the powers of the Company, though not of the directors, the Company can alone complain or ratify, and no outsider has any *locus standi*. But no Company can ratify a fraud or other crime. See Table A, art. 71, and notes in Buckley on the Companies Acts.

A special liability is imposed upon directors with regard to prospectuses. In the first place, it is provided by the Companies (Consolidation) Act 1908, ss. 80-81, directors and proposed directors must sign personally or by agent all prospectuses, and the prospectus must contain all statutory particulars, especially disclosure of contracts and the interests of promoters and directors therein, the past issue of shares and debentures not to be paid in cash, unless it is issued as a circular or notice to existing members or debenture-holders only. By s. 84, when a prospectus invites persons to subscribe for shares or debentures in the Company, every person named therein as a director or as having agreed to become a director (as well as the promoters, etc.) is liable to compensate all subscribers for damage caused by their acting on any untrue statement in or referred to in the prospectus. But the defendant may prove that the untrue statement was accepted as the report or valuation of an expert or public official, or otherwise that he had reasonable ground to believe its truth—the contrary not being proved. The director can also escape if he proves that the prospectus was issued without his consent or that on becoming aware before allotment of any untruth therein, he withdrew his consent and set forth the reasons by public notice. Thus are completed the various attempts to enforce liability for issuing improper prospectuses, the previous attempts having been in the Companies Act 1867, and the Directors' Liability Act 1890. Promoters of companies are separately liable for similar faults. In the second place, directors are liable at common law in respect of fraudulent statements in prospectuses, and to a certain extent also for untrue statements made negligently, but in good faith. W. A. B.

DIROM, MAJOR ALEXANDER, of Muiresk (end of 18th century), wrote *Inquiry into the Corn Trade and Corn Laws of Great Britain, and their Influence on the Prosperity of the Kingdom*, 1796, with appendix by W. Mackie of Ormiston. Through the alteration of the old corn laws, "Our agriculture, which had reached its highest prosperity between 1730 and 1750, has ever since been rapidly declining, as is shown by the fact that 137,000 *more* people were employed in the cultivation of land between 1741 and 1750 than between 1773 and 1784." This pamphlet was answered in 1798 by Rev. J. HOWLETT (*q.v.*), *Dispersion of the Gloomy Apprehensions of late repeatedly suggested from the Decline of our Corn Trade.* Mr. Howlett thinks that the increased consumption of a greater population, the demand for finer grain than formerly, and the greater numbers of live stock, especially horses—sufficiently account for the increased foreign importation (Dugald Stewart, *Political Economy*, vol. i. 247 *seq.*) J. B.

DISABILITIES OF ALIENS. The only disability to which aliens now remain subject is that they cannot hold any shares in British ships (see ALIENS; and ALIEN IMMIGRATION, App.). E. S.

DISABILITIES OF INFANTS. An infant (*i.e.* a person not having attained the age of 21 years) cannot, as a general rule, enter into any binding contracts or make any valid dispositions of property. To this rule there are several exceptions. An infant may (1) if a male, marry after having attained the age of 14; if a female, after having attained the age of 12; (2) with the consent of the court (*a*) make a valid marriage settlement (18 & 19 Vict. c. 43) (*b*) make leases and grant renewals of leases (11 Geo. IV. and 1 Will. IV. c. 65, §§ 16 and 17); (3) enter into binding contracts

relating to the supply of necessaries—including all such things as are considered appropriate to the station of life of the person concerned, including contracts of marriage, and of beneficial employment and agency; (4) an infant after attaining the age of 21 cannot retain property subject to liabilities acquired during his infancy without satisfying the liabilities incurred during that time, *e.g.* arrears of rent, calls on shares. On the same principle an infant partner who on attaining 21 retains his share of the profits, must allow himself to be debited with his share of the losses incurred during his minority. (5) Infants over 15 may alienate gavelkind land for its full value, and on performing certain formalities, and there are other local customs giving infants an exceptional capacity to contract. (6) Infants holding themselves out to be of full age are liable to restore any advantage they have obtained by their misrepresentation to a person who acted on the faith of it, and may be criminally liable as well. E. S.; W. A. B.

DISABILITIES OF LUNATICS AND DRUNKARDS. In this case it is not quite correct to speak of a disability. Infants and married women are under permanent restrictions imposed on them as a general consequence of their status. Mental derangement, on the other hand, does not in itself create a new status. No transaction could be invalidated by the simple fact that a party to the transaction is a lunatic or a drunkard; on the other hand, a person generally sane or sober may under certain circumstances avail himself of the plea of mental incapacity. The rule is, that a contract or a disposition of property—which term includes testamentary dispositions—is generally not binding on a person who at the time of making the contract or disposition is not of sufficient mental capacity to understand the nature of the transaction. Whether the incapacity is due to insanity in the proper sense of the word, to mere temporary derangement or illness, or to drunkenness, is quite immaterial. As a general rule the party, or representative of the party, who wishes to escape an obligation on the ground of mental incapacity must bring evidence to show that at the essential moment such incapacity existed, but where a person has, after a judicial investigation (inquisition), been formally declared a lunatic, the presumption is reversed, and the party wishing to uphold a transaction to which the lunatic was a party must prove that the contract or disposition was made during a lucid interval. There is one exception to the above-mentioned rule. When a party to a contract, otherwise voidable on the ground of the mental incapacity of the other party, did not, as a matter of fact, know of such incapacity and had no reasonable ground for knowing it, and where it is impossible to restore the parties to their former position, the incapable party or his representative must abide by the consequences of the contract. Thus the personal representative of a deceased lunatic who, while in a state of mental incapacity not known to the other side, had purchased an annuity from an insurance office, cannot recover the purchase money. (See DRUNKARDS.) E. S.

DISABILITIES OF MARRIED WOMEN. It is generally believed that the Married Women's Property Act of 1882 has removed all the disabilities of married women, but this is not the case. A married woman whether she has separate property, not subject to restraint on anticipation, or not, can since the above Act, as modified by the Married Women's Property Act 1893, c. 63, make contracts binding her unrestrained separate property, which will bind all her property on the cessation of the restraint, *i.e.* on the dissolution of the marriage, whether by the husband's death or otherwise, when even the restrained property becomes liable to past and present contractual liabilities.

Before the passing of the Act of 1893 a wife having no separate estate could not dispose by will of any separate estate subsequently falling to her, without remaking or republishing the will. This has been remedied by the mentioned Act, so that her will, like other wills, now "speaks from the death," *i.e.* is interpreted as having been made at that time, saving internal indications to the contrary.

A married woman entitled to a life interest in property subject to the usual restraint on anticipation, but not possessed of other separate property, incurs large debts. Her creditors are absolutely without any remedy. This state of things is most unsatisfactory. The old common law rule was based on the assumption that husband and wife were one person; the wife's proprietary existence ceased on the day of her marriage, and became absorbed into that of her husband, who took all her personal property, and possessed extensive rights of control and enjoyment with respect to her real property. A wife now retains all her property and has extensive rights of disposition; the remaining restrictions have no social or economical reason, and their practical inconvenience is obvious. The above statement would not be complete without mentioning that the Courts of Chancery protected married women by enforcing a settlement of their property acquired after marriage, and invented the "separate estate" before any protecting statutes were passed. (See MARRIAGE SETTLEMENT.) E. S.; W. A. B.

DISCHARGE (Scotland). Extinction of a debt or obligation, which may be by—(1) payment or performance; (2) abandonment of claim by creditor; (3) compensation or set-off; (4) novation or replacement of the original obligation by another obligation; (5) delegation, or replacement of the original debtor by another

debtor; (6) confusion, the debt and the credit, in a condition immediately and finally to extinguish one another, coming to coincide in the same person. Also (Scotland) the document whereby the creditor discharges the debtor. A. D.

DISCHARGE IN BANKRUPTCY. Under the Bankruptcy Act 1883 a discharge frees the debtor from all debts and liabilities provable in the bankruptcy, except crown debts, and debts incurred by fraud or through a fraudulent breach of trust. Crown debts can be released by a certificate from the treasury. By the amending act of 1890, it is further provided that, unless the court otherwise orders, the discharge shall not release the debtor from any liability under a judgment in an action for seduction, or under an affiliation order, or under a judgment against him as a co-respondent.

Under the act of 1869, the discharge of a bankrupt was a matter practically in the hands of his creditors unless he had paid a dividend of 10s. in the pound. Under the acts of 1883 and 1890, it is in all cases a matter for the judicial discretion of the court.

At any time after being adjudged bankrupt, the bankrupt may apply to the court for an order of discharge, but the application cannot be heard until after his public examination is concluded. Notice of the day fixed for the hearing must be gazetted, and sent to the creditors. On the hearing, any creditors who desire it, must be heard, and the court must take into consideration a report of the official receiver as to the bankrupt's conduct and affairs. If it is shown that the debtor has been convicted of a misdemeanour under the Debtors' Act 1869, the court, in the absence of special circumstances, is directed to refuse the discharge. If, on the other hand, the debtor is shown to have been guilty of certain minor acts of misconduct specified by the act, such as the assets, without reasonable excuse, not amounting to 10s. in the pound, or not keeping proper trade books, or trading with knowledge of insolvency, or having been guilty of fraudulent conduct, the court must either refuse or qualify the discharge. A discharge may be qualified either by suspending it for a specified time, usually not less than two years, or by imposing conditions as to after-acquired property, as, for instance, by directing judgment to be entered up against the debtor for a certain sum. If the debtor's conduct has been blameless he is entitled to an unconditional discharge, and may also obtain a certificate from the court removing any civil disabilities consequent on bankruptcy. An undischarged bankrupt who obtains credit from any person to the extent of £10 or upwards without informing such person of his status is guilty of a misdemeanour. The foregoing enactments are now reproduced and consolidated by the Bankruptcy Act 1914. M. D. C.

DISCLAIMER. A person appointed as trustee of a will or settlement who does not wish to accept the trust will find it safer as a general rule to execute a deed by which his non-acceptance is stated. A deed of this nature is called a deed of disclaimer. The word disclaimer is also generally used for any act of renunciation. E. S.

DISCOMMODITY. The terms *disutility* and *discommodity* have been introduced into the nomenclature of political economy by Jevons (*Theory of Political Economy*, 1879, pp. 62, 63) as the opposites or contraries of the terms utility and commodity. Thus, by disutility he means, not the mere absence of utility, but the quality of causing positive inconvenience or discomfort. Similarly, by discommodity he means any action or material thing which possesses disutility. The term discommodity is used in much the same sense by Professor Marshall. "While demand is based on the desire to obtain commodities, supply depends on the overcoming of the unwillingness to undergo 'discommodities.' These fall generally under one of two classes, labour and the abstinence involved in putting off consumption" (*Principles of Economics*, vol. i. ed. 2, 1891, p. 193). J. N. K.

DISCOUNT. The term "discount" signifies an abatement, or deduction, and is in practice applied in several ways: (1) stocks or shares are said to be at a discount when their market value shows an abatement from par value; (2) the stock of a trader is sometimes, from bankruptcy or other cause, sold at a discount from cost price; (3) a quoted or published price may be by custom subject to an abatement or discount, to purchasers for the trade, or for export; (4) an account for goods delivered may be paid at a date earlier than is usual upon receiving a discount therefrom; or (5) a bill of exchange, due at a future date, may be discounted, *i.e.* sold for cash at an agreed abatement.

Excepting in the first case, the discount is usually expressed at a rate per cent, and in cases 2, 3, 4, the formula for calculation is simply $D=\frac{P\times R}{100}$. In the discount of a bill of exchange, the time it has to run is taken into account, and the formula is $D=\frac{P\times R\times T}{100}$; T representing, in theory, fractions or multiples of a year, but, in the practice of a banker, a fraction only.

In law, and in fact, the operation of discounting a bill is a purchase, and the property therein passes to the purchaser, who acquires all the usual rights of a holder (see BILL OF EXCHANGE, ENDORSER, etc.) In practice, a banker always places the amount of the bill to the credit of his customer, debiting him at the same time with the discount. In most discount operations the effective rate of interest

upon the capital employed is greater than the nominal rate of discount. In the first three cases referred to above, time is an uncertain factor, and the effective rate will be increased according to the shortness of the time that elapses before the investment is realised; or will be diminished if that time should exceed one year. In obtaining discount upon the prepayment of an account the effective rate is dependent upon the time when payment would otherwise become obligatory. In discounting a bill of exchange, the time it has to run is taken into account in deciding the *amount* of discount, and the only advantage in the effective rate over the nominal rate is that—common also to all the other cases—arising from the fact that the discount is received at once.

Having regard to this fact, it is taught in the schools that *true* discount is the difference between the whole sum and its "present value," this latter being defined as the sum which, if put out at interest at the rate named, would amount, at the end of the given term, to the sum due. It is also further laid down that the current method of charging discount produces less to the holder than he should equitably receive, and examples are usually given only in what is termed the "more correct rule" of "*true discount*." But this teaching is altogether wrong, and appears to be based upon the erroneous notion that the operation of discounting is an *advance*, whereas it is a purchase. Moreover, as the word signifies an abatement, or "reckoning from," it is clear that such abatement must be calculated upon the gross sum, and not upon the net result of its own deduction. The theory of "*true discount*," also connotes the idea, which is equally unsound, that there is an "equity" in rates other than that obtained by free sale in a free market. As a matter of fact it is always found that the discount rate on bills is lower than the rate of interest on advances, which though chiefly due to the more liquid character of an investment in bills, is also, no doubt, in part due to the advantage under discussion.

The extent of this advantage varies directly with the nominal rate, but in greater degree. Thus:

With discount at	1%	the effective rate is	1·01	%	p. ann.
"	"	3% "	"	"	3·0927 + % "
"	"	5% "	"	"	5·2631 + % "
"	"	10% "	"	"	11·1 % "

From these instances it appears that the extra profit increases almost as the square of the rate.

But this advantage is derived in the way of compound interest, and is therefore dependent upon the frequency with which the profit is received. The operation of the rule is, however reversed, and the shorter the term the less is the profit. The rates quoted above are based upon a supposed discount of twelve months' bills, and as bankers very rarely discount bills with more than six months to run, and in by far the greater number of cases take bills of three months, or less, the advantage they obtain is very much less than is generally supposed. The effective rate derived from a year's full employment of capital in discounting at 5 per cent is as follows:

In 6 months'	bills	5·19375	%
" 3 "	"	5·16	%
" 2 "	"	5·14875	%

As this presupposes an immediate re-employment of the full amount obtained by the payment of each bill as it falls due, and a constant rate of 5 per cent, it is considerably above the probable experience. R. W. B.

DISCOUNT, FRENCH STOCK EXCHANGE (Fr. *Escompte*). The privilege accorded to buyers for the account on French bourses, to demand immediate delivery. The right is based on the fiction that sellers always possess the stock or shares they have sold, and is reaffirmed in Art. 63 of the decree of the 7th October 1890, relative to the office of *agent de change*:—"The purchaser may at all times call for the delivery, by anticipation, of the securities negotiated, whether firm or at option." Sellers may, however, stipulate that the operation is not discountable. The privilege is not frequently exercised, and, unless the market has been prepared by a corner, the manœuvre may turn against those who employ it, for if the seller has no difficulty in procuring the stock, the effect produced may be the reverse of that intended. Notice of "discount" must be given before business hours by the buying *agent de change* to the selling one with particulars which are posted in the private room of the corporation in the bourse building, and the purchase money must be deposited. The seller is allowed five days to pass the stock or shares, and two additional if the transfer requires the acceptation of the buyer, after which the usual measures against defaulters may be applied. T. L.

DISCOUNT, LONDON STOCK EXCHANGE The word is used in two senses, the one legitimate, the other being a piece of slang. First the scrip of a new issue is usually quoted at a discount, or at a premium, as the market price falls below or exceeds the amount of the instalment so far paid up. Thus, were a new government bond to be on the market, on which only £25 per cent had been paid up, the price—supposing it to be £26, would be quoted £1 premium. If, for another example, the shares in the Manchester Canal, on which £10 had been paid, were purchaseable at £8, the market price would be £2 discount. When new scrip has been fully paid up, the necessity of quoting at a premium or discount ceases, and the plain price is then customarily quoted. The *second* sense in which the word discount is used on the stock exchange is to imply a preliminary effect on the market of news, or some other influence

which tends to raise or depress prices. There have, again and again, been rumours of coming war between Russia and England, and a fall in prices of government stocks was produced merely by the "discount" of the effect which an actual outbreak of hostilities would have upon the market. Similarly, the shares of this or that joint-stock company sometimes fall in the market, or rise, as the case may be, dealers and speculators being anxious to discount the effect of a good or bad dividend. Occasionally the effect of this discounting process is excessive, and the actual occurrence of what is anticipated or discounted, and the confirmation of rumours, is often followed by reaction.

On the stock exchange the word is used rather as a piece of slang to convey the impression that an expected event—say the death of the late Emperor Frederick of Germany—has been acted upon in advance by dealers and others, who by putting down or raising the quotations of the stocks in which they deal, "discount" the probable effect of that event on the market. Thus we hear of news being discounted, *i.e.* anticipated in a similar way as the value of a bill is anticipated under Discount.

A. E.

DISCOUNT HOUSES. See BILL BROKING.

DISCOVERIES, GEOGRAPHICAL (INFLUENCE ON TRADE OF). The effect of discovery is to modify or recast the conditions under which trade and industry are carried on. But such effect almost invariable though it be, may and does manifest itself in certain different directions, and thus, though it would be hard to describe within reasonable limits the results produced in the economic world by the discoveries which have been made, it is possible to suggest the directions in which these may be sought. Geographical discoveries may affect trade in the following ways—

a. By providing new sources for the supply of raw material.

b. By opening up new markets.

c. By the ultimate evolution of new trade rivals or competitors.

It is hardly necessary to point out that newly-discovered countries may pass through all the phases described above with regard to other and older-established countries. North America, for example, is the great source of cotton supply, it is a trade rival, and for some time it offered a large opening for the import of goods of European manufacture. As a rule, however, discovery tends to promote the greater differentiation of trade and industry. Each country attains to a distinct and separate position in regard to either supply or manufacture.

There is, however, another mode in which trade is affected by discovery.

d. By opening up new sources for the supply of the precious metals. These may be discovered in an old country; or a new country possessing gold or silver mines may be suddenly discovered. The discovery of the Americas in the 15th century was of this latter character (see GEOGRAPHY, COMMERCIAL; PRECIOUS METALS, DISCOVERIES OF). E. C. K. G.

DISCOVERIES OF PRECIOUS METALS. See PRECIOUS METALS, DISCOVERIES OF.

DISCOVERY IN ACTIONS. Discovery in its widest sense means the procedure by which a party in an action may obtain sworn information from his opponent with reference to matters affecting the questions in dispute. Such information may be obtained (1) by administering interrogatories (written questions relating to relevant matters which must be answered by affidavit); (2) by requiring an affidavit of documents (a list of documents, verified by affidavit, relating to the matters in question in the action, being in the possession or power of the party from whom discovery is sought); (3) by giving notice to produce for inspection any documents referred to in the pleadings or in the affidavit of documents. A party may refuse to answer interrogatories or to produce documents for inspection on certain grounds, as for instance because the answer or the production of the document would subject him to criminal proceedings, or that the required disclosure would violate professional confidence or be detrimental to the public interest. Non-obedience to an order of the court directing discovery may subject the disobedient party to imprisonment.

E. S.

DISCRIMINATING OR DIFFERENTIAL DUTIES. Duties imposed upon commodities, and differing in amount according to the particular source from or mode in which those commodities are obtained.

When discriminating or differential duties have been imposed, the circumstances most frequently taken into account have been (*a*) the process of production employed, as in the case of a manufactured article produced either by hand or by steam power; (*b*) the material used, as in the case of sugar made from cane or from beetroot; and (*c*) the country or place of origin, as in the case of what are termed CORN LAWS (*q.v.*)

In cases in which regard has been had to the country or place of origin, the object has been either to protect the home product, or to favour importation from one particular place or in one particular manner, as, for example, where lower duties have been charged on the produce of a colony or of a country with which special treaty obligations are in force, or where higher duties are imposed on goods imported in shipping carrying a particular flag.

In an interesting note to his edition of the *Wealth of Nations* (new edition, 1863, p. 599) M'Culloch discusses the effects of the differential duties imposed on foreign timber to favour our North American colonies, and Sir Thomas Farrer,

in his *Free Trade versus Fair Trade*, refers somewhat fully to the proposals of the fair traders for differential duties in favour of the colonies. The latter writer remarks that such duties are "open to the fatal objection which makes all protection odious to free traders—viz. that they hinder people from buying and selling where they find it to their interest to buy and sell; that they limit production by preventing people from using their natural capacity to the utmost in making and selling the things which they can make better than others."

J. S. Mill arrives at somewhat similar conclusions. "Whatever else may be alleged in favour of such distinctions, whenever they are not nugatory they are economically wasteful. They induce a resort to a more costly method of obtaining a commodity, in lieu of one less costly, and thus cause a portion of the labour which the country employs in providing itself with foreign commodities, to be sacrificed without return" (*Principles*, bk. v. chap. iv. § 5).

The considerations affecting discriminating or differential duties are very closely connected with those relating to the general subject of free trade and protection (see also MOST FAVOURED NATION CLAUSE). T. H. E.

DISCUSSION (Scotland). (1) A cautioner or surety, if not bound jointly and severally with the principal debtor, was formerly entitled to demand that the principal debtor should be "discussed"—*i.e.* that the creditor should employ his means of recourse against him, before he himself was interfered with. This privilege is, since 19 & 20 Vict., c. 60, § 8, now only possessed by cautioners who have expressly stipulated for it. (2) Heirs who represent the ancestor are liable for all his debts; but only in a certain order, which depends on the character in which they succeed; and those who come later in this order are entitled to insist that before they themselves are called upon, those who come earlier should be "discussed," *i.e.* made to choose between paying the debts and renouncing the succession. In English law choice is described as being "put to Election" (see ELECTION).

[Lord M'Laren on *Wills*, § 2269.] A. D.

DISHONOUR OF A BILL. Refusal to accept; or non-payment when due (see BILL OF EXCHANGE; DILIGENCE; NOTING OF BILLS; PROTEST OF BILLS). A. D.

DISPOSITION (Scotland). Generally a unilateral deed of conveyance. The "disponer" "sells and dispones" or "gives, grants, and dispones" to the "disponee," the thing conveyed. A "disposition and settlement," or "trust disposition and settlement," a disposition, reserving liferent and dispensing with the necessity of actual delivery of the deed, to trustees with powers and under directions specified, is a common form of making one's will. "Dispositions in security," or "bond and disposition in security," are forms of mortgage. A. D.

DISTANCE IN TIME AS AN ELEMENT OF VALUE. Distance does not "lend enchantment to the view" of a future pleasure compared with the same pleasure regarded as present. "There is no man perhaps to whom a good to be enjoyed to-day would not seem of very different importance from one exactly similar to be enjoyed twelve years hence, even though the arrival of both were equally certain" (John Rae, *Statement of some new Principles of Political Economy*, Boston, 1834, a work referred to by Mill in terms of high encomium, *Pol. Econ.*, bk. i. ch. xi.) This incident of our moral nature has often engaged the attention of philosophers. Thus Locke (*Essay concerning Human Understanding*, bk. ii. ch. xxi. § 63): "When we compare present pleasure or pain with future, we often make wrong judgments of them, taking our measures of them in different positions of distance. Objects near our view are apt to be thought greater than those of a larger size that are more remote; and so it is with pleasures and pains, the present is apt to carry it, and those at a distance have a disadvantage in the comparison." Hume gives a more refined explanation of the influence of distance on the will (*Treatise on Human Nature*, bk. ii. pt. iii. § 7; compare the remarks, bk. i. pt. iii. § 9, with respect to a future state). Jevons expresses the depreciation of future pleasures by a fractional factor (a function of the distance in time). Multiplying the future pleasure by this factor we have its value relatively to present pleasure[1] (*Theory of Political Economy*, 3rd ed. p. 72, cp. p. 34). The factor expressing the effect of remoteness should be unity, if human nature were perfect. As Professor Sidgwick says (*Methods of Ethics*, bk. ii. ch. ii. p. 1, note), the "equal and impartial concern for all parts of one conscious life is perhaps the most prominent element in the common notion of the *rational*—as opposed to the merely *impulsive*—pursuit of pleasure." But in fact human nature always falls short of this ideal; and according to the degree of such imperfection nations and classes differ in the desire of accumulating the means of future pleasure (see examples quoted from Rae by Mill, *Pol. Econ.*, bk. i. ch. xi.) The "extent of the intellectual powers" is assigned by Rae as one of

[1] Jevons's equations between pleasures (*loc. cit.*) at different distances of time relate primarily to *final* utilities. But it deserves attention that the equations hold for utilities not qualified as final, upon certain not violent assumptions, which are stated by Professor Marshall in his *Principles of Economics*, p. 179. It is impossible to resist the conclusion, however paradoxical at first sight, that the depreciation of future pleasures, the rate at which they are "discounted," is measured by the rate of discount in the loan market (*Principles, loc. cit.*, and Mathematical Appendix, note 5).

the circumstances which determine the "effective desire of accumulation."

A wiser ground for preferring present goods is their comparative certainty.[1] The "bird in the bush" may never come to hand. The uncertainty of the future is greater, the lower the state of civilisation. "Stability, . . . the reign of law and order," is assigned by Rae as another condition of the effective desire of accumulation.

Again some pleasures are more "urgent" than others. Tastes may change, the sense of pleasure will be dulled in some cases and intensified in others by advancing age. The young man who looks forward to indulging himself in Alpine tours when he has made his fortune "would much rather have them now, partly because they would give him much greater pleasure now" (Marshall, *Principles of Economics*, bk. iii. ch. v.) On the other hand it may be foreseen that certain wants will be more pressing at a future time than at present. Ice will be wanted more next summer than now in winter (Böhm-Bawerk). Age will require more comforts than youth. Prudence dictates spreading out the consumption of a given store of wealth according to the law indicated by Jevons (*loc. cit.*)

The distance in time over which consumption is thus distributed is extended beyond the lifetime of the individual by his interest in posterity. As Mill says (*loc. cit.*): "If mankind were generally in the state of mind to which some approach was seen in the declining [Roman] empire—caring nothing for their heirs as well as nothing for friends, the public, or any object which survived them—they would seldom deny themselves any indulgence for the sake of saving beyond what was necessary for their own future years." Rae places the prevalence of the "social and benevolent affections" first among the conditions of the effective desire of accumulation.

The play of the various motives which have been indicated determines the value of future with respect to present wealth on the loan market, in other words the rate of interest. The spendthrift borrower prefers present to future satisfactions. The borrower of capital to be employed in business is moved by the prospect of future profits. The lender is deterred by providence from grasping all the immediate pleasure which is in his power. Also investment in the "personal capital" of skill and knowledge is governed by motives acting at a great distance in time. The remuneration of the skilled artisan and *entrepreneur* may be expected to compensate the sacrifices made by parents for the education of their children (Cp. Adam Smith, *Wealth of Nations*, bk. i. ch. x., and Marshall, *Principles of Economics*, bk vi. ch. v., 2nd edition).

Thus distance in time is an element in the value of two important agents of production, borrowed capital and trained labour. It is accordingly also an element in the value of products (so far at least as the agents of production enter in different proportions into the products—Ricardo, *Pol. Econ.*, ch. i. §§ 4 and 5, cp. Mill, *Pol. Econ.*, bk. iii. ch. iv. §§ 3-5).

Also the demand for commodities, as well as the supply of them, is affected by the distance in time over which motives range. Where providence prevails, there will be a demand for durable clothing and articles of furniture rather than drinks and other objects of immediate gratification (Rae, *op. cit.* ch. vii.) Now in the case of articles of which the cost of production varies with the quantity produced—that is in the case of most articles—the extent of demand is apt to affect value (Sidgwick, *Pol. Econ.*, bk. ii. ch. ii. and Marshall, *passim*). In this way then, also distance in time is an element of value.

[Leading authorities on this subject are John Rae, M.D., *Statement of some new Principles of Political Economy*, especially ch. vi. and vii. Böhm-Bawerk, *Positive Theory of Capital* (translated by Wm. Smart); especially bk. v. and parts of bk. i.—Marshall, *Principles of Economics*, 2nd edition, bk. iii. ch. v., and other passages relating to discounted pleasures. Other authorities are cited in Pantaleoni's *Principij*. The subject is referred to in most recent treatises on political economy under the head of Capital. Among the earliest of such references are Senior's Observations on Abstinence in his *Political Economy*, pp. 58-59; and the following remarkable passage which occurs in S. Bailey's *Critical Dissertation on Value*, p. 218.

"The time necessary to produce a commodity may, equally with the requisite quantity of labour be a consideration which influences the mind in the interchange of useful or agreeable articles. We generally prefer a present pleasure or enjoyment to a distant one, not superior to it in other respects. We are willing, even at some sacrifice of property, to possess ourselves of what would otherwise require time to procure it, without waiting during the operation, of what would require labour without personally bestowing the labour. If any article were offered to us, not otherwise attainable except after the expiration of a year, we should be willing to give something to enter upon present enjoyment. On the part of the capitalist who produces and prepares these articles, the time required for the purpose is evidently a consideration which acts upon his mind. If the article is wine, he knows that the quality is improved by keeping; he is aware that the same excellence cannot be imparted to any wine without the employment of capital for an equal period; and that people will be found to give him the usual compensation rather than employ their own capital in producing a similar article."] F. Y. E.

[1] It is not easy to distinguish the influence in the will of mere remoteness from that of the uncertainty which attends future events. Is it possible to evaluate separately the Jevonian factors p and q? (See *Theory*, *loc. cit.*; and cp. Pantaleoni, *Principij*).

DISTRESS. The different kinds of distress may be distinguished according to (*a*) duration or (*b*) cause. (*a*) may be temporary or chronic. The cotton famine, as it is called, during the years of the American civil war, produced temporary distress in Lancashire, which came to an end with the resumption of business at the close of the war; change of fashion often does the same in towns which depend upon a single industry, as Nottingham. On the other hand we speak of the distress in certain parts of London as chronic, meaning that the standard of living is habitually low. So too (*b*) the cause may vary. Distress may be due to disturbances of the market, a collapse of credit, a falling off in demand, or a change in its direction. Again, it may be due to the failure of a crop, as of the potato in the west of Ireland, or the famines in various parts of India. The treatment of distress will vary with the kind of distress, and will aim either at the alleviation of it, when actually existing, or the removal of its causes, and so the prevention of its recurrence. In the case of widespread temporary distress, temporary measures of relief are often tried. The poor-law is often stretched to allow of relief to able-bodied labourers after a labour-test, instead of limiting it to the workhouse, and in the same spirit charity is often in such cases administered with the help of a labour-test, works of public improvement being set on foot, and wages paid out of charitable funds. If carefully managed, with strict inquiry and personal supervision, these remedies are sometimes effective, but they are attended with great dangers. They are often demoralising to the employed, for the work done is quite disproportionate to the wages paid; they are largely resorted to by persons whose distress is chronic and due to causes within their own control; they attract applicants from other districts, and so swell the evil; they divert employment rather than increase it; they come to be regarded as a permanent source of relief. All these evils are intensified when temporary distress is met by indiscriminate almsgiving. The object of remedies should be to remove the causes from which distress comes, but this is no easy task. When it arises from speculation, or change of fashion, the cure can be found only in a higher sense of responsibility on the part of both producers and consumers. When it is due to overcrowding of a locality or an industry, the cure must be sought in organised effort directed towards an increased mobility of labour from place to place and employment to employment, an increased efficiency, a higher standard of living, a truer knowledge of self-interest. The state can do much, by insisting upon the minimum at least of sanitary progress, the provision of an elementary and perhaps a technical education; but the individual, by example and by influence, can do far more.

The mistakes so commonly made, with the best intentions, in attempts to relieve distress, arise from the scale on which such attempts are made more than from any other single cause. Before relief can be undertaken the mass must be broken up into its constituent units, for every individual differs in history, in circumstances, and in prospects from every other, and to attempt to apply the same remedy to all cases is as dangerous as it would be in medicine. But the power of discriminating between different kinds of need is itself the result of long experience, and even when a judgment has been formed on this point, the remedy is often far to seek. It would be impossible to lay down any rule which would cover all cases of distress, but perhaps the following principles apply to a large majority of them. 1. The help given should be determined far more by the future than the past or even the present, the two latter being valuable chiefly as a guide to the former. Many a remedy which is effective for the moment is disastrous in its after effects, and it will be so in proportion as it fails to make the recipient independent of further help. 2. All relief should be adequate to effect its purpose. 3. Help in money and kind, though often inevitable, should be sparingly given, for it tempts the recipient to have recourse to it on every emergency. 4. The results of the help given should be felt after the need for it is past, a man, *e.g.* who has been assisted by a loan should be taught, when the loan is repaid, to continue the economies required to pay the instalments, and put an equivalent amount weekly in the savings-bank. 5. The responsibility of the members of a family, one to another, should be enforced and developed. 6. Lastly, the knowledge and the judgment necessary to put these principles in practice can rarely be attained unless men act in some sort of combination.

[The relief of distress is the subject of the publications of the *Charity Organisation Society*, 15 Buckingham Street, W.C., especially the *Charity Organisation Review*, and the preface to the *Charities Register*. — Moggridge, *Method in Almsgiving*.—Booth, *Life and Labour*.—Pretyman, *Dispauperisation*.—Mackay, *The English Poor*.] L. R. P.

DISTRESS (Legal Term). The legal remedy known as distress consists in the taking of a chattel of the wrongdoer by the injured party as a means either of compelling the wrongdoer to give redress or of obtaining satisfaction out of the thing seized. Generally speaking, the party who has suffered by a breach of contract, or by a tort, must bring his action for damages, and, if the wrongdoer fails to pay the damages awarded, must have the goods of the wrongdoer taken in execution by legal process. He cannot of his own motion seize chattels of the wrongdoer. The remedy by distress is available prin-

cipally in the following cases: (*a*) where a tenant has made default in paying his rent; (*b*) where a person liable to tithe rent charge has made default in paying; (*c*) where a person liable to pay certain rates and taxes, *e.g.* poor rate or highway rate, has made default in paying. Also when cattle stray and do damage they may be distrained upon by the party injured.

Of the above cases the first is the most important. Subject to certain exceptions, the landlord may distrain upon the tenant as soon as the tenant has made default. A distress may not be made by night. In making a distress it is not lawful to break open the outer door of a house, but when the house has once been entered, any inner door may be forced in search of goods. All goods found on the premises, whether belonging to the tenant or to a third party, may be taken subject to certain exceptions, of which the chief are as follows: (*a*) in favour of the goods of a guest at an inn; (*b*) in favour of goods received by the debtor to be worked up in the way of his trade; (*c*) in favour of the bedding, the apparel, and the tools of the debtor and his family. The goods distrained must be kept five days,—or fifteen days if the owner so request in writing and give security for any additional cost incurred,—after which they may be sold. The surplus left, after satisfying the debt and costs, must be paid to the debtor. If the proceeds of sale do not satisfy the debt and costs, a second distress can be levied. The person distrained upon has legal remedies for irregular, excessive, or wrongful distress.

Historically the remedy of distress appears to be a relic of the period when legislators sought rather to regulate than to suppress the use of self-help by injured parties. It occupies a far more important place in the early Celtic and German codes than in modern law. It has been retained only in cases where the claim of the creditor was regarded as particularly strong. It has been criticised as exceptional, as harsh, and as unnecessary; but whether it should be altogether abolished is an open question.

[For the outline of the law of distress, consult Stephen's *Commentaries*, vol. iii. pp. 261-274.—For its details see Oldham and Parker, *Law of Distress*.—For an historical investigation of the remedy see Maine *On the Early History of Institutions*, lectures 9 and 10.] F. C. M.

DISTRIBUTION (or in full THE DISTRIBUTION OF WEALTH), serves in most economic text books as the heading of that part of political economy which deals with different classes of income such as rent, profit, interest, wages, and their subdivisions. The use of the phrase in this way is of modern origin.

The system of the PHYSIOCRATS (*q.v.*) involved the conception of the annual produce of a country being divided between the productive class, the sterile class, and the landlord class. The process of payments and exchanges, intermediate between production and consumption, by which the division ("*partage*," *Œuvres de Quesnay*, ed. Oncken, 1888, p. 315) was effected, was called "the distribution of the expenses of a nation" ("*la distribution des dépenses d'une nation*," *ibid.* p. 320). The *Tableau Économique* (see PHYSIOCRATS) was an arithmetical representation of "the regular order" ("*l'ordre régulier*," *ibid.* p. 319) of this distribution. If Adam Smith's account of the economical table (*W. of N.*, bk. iv. ch. ix.) be compared with Quesnay's *Analyse du Tableau* (*Œuvres*, ed. Oncken, pp. 305-328), no doubt can be felt that the latter part of the title of book i. of the *Wealth of Nations*, "of the order according to which its [labour's] produce is naturally distributed among the different ranks of the people," was like the title of Turgot's *Réflexions sur la formation et la distribution des richesses*, suggested by the physiocratic system. But in adopting the physiocratic phrase, Adam Smith slightly altered its meaning. Though he followed the physiocrats in attaching great importance to the division of the produce between the productive and the unproductive class (*W. of N.*, bk. i. ch. vi. *ad fin.*, and bk. ii. *passim*), what he understood by the distribution of the produce seems to have been, chiefly at any rate, its division into wages, profits, and rent; "The price . . . of all the commodities which compose the whole annual produce of the labour of every country, taken complexly, must . . . be parcelled out among different inhabitants of the country, either as the wages of their labour, the profits of their stock, or the rent of their land; the whole of what is annually either collected or produced by the labour of every society, or, what comes to the same thing, the whole price of it, is in this manner originally distributed among some of its different members" (*ibid.* bk. i. ch. vi.)

Having thus stated that the produce is divided or distributed into the three great portions of wages, profit, and rent, Adam Smith might have been expected to proceed to discuss the circumstances which determine the proportions in which it is divided between the three, to explain what determines the relative magnitude of the whole of wages, the whole of profit, and the whole of rent. He does not do so, however, but "endeavours to explain what are the circumstances which determine" (see ch. vii. *ad fin.*), the absolute magnitude of *per capita* wages, the rate of profit or ratio between profit and capital, and the absolute magnitude of rent per acre. There is therefore considerable justice in J. B. Say's remark that the *Wealth of Nations* contains "no complete and well-connected account of the manner in which riches are distributed among the community" (*Traité*, 8vo, ed. 1876, p. 37). Say did not supply

much of the deficiency himself, but his plan of making "production" and "distribution" the headings of separate parts of political economy has been generally followed by later economists. It was introduced into England by James Mill in his *Elements* (1821). Ricardo was led by the course of his argument against the corn laws (see his *Essay on the Influence of a Low Price of Corn*, 1815) to attach great importance to the proportions in which the whole produce of the earth is divided between rent, profit, and wages. "To determine the laws which regulate this distribution is," he declares, "the principal problem in political economy" (*Principles of Pol. Econ.*, pref.) But this problem did not supersede the older question as to the circumstances which determine the ratio between interest and capital, and the absolute magnitude of rent and *per capita* wages.

As regards the distribution of profits and rent among individual capitalists and landlords, economists have usually been silent, taking it for granted that every one knows why some individuals possess much property and others little or none. As regards the distribution of wages among individual labourers, it has in a similar manner been assumed that the reasons why some individuals earn more than others working in the same occupation are too obvious to require explanation, but it has been usual to follow Adam Smith (*W. of N.*, bk. i. ch. x.), in an endeavour to explain why the earnings of the average workman in some trades are greater than those of the average workman in other trades.

The distribution of wealth or income into rent, profit, and wages, and the distribution of these three shares among individuals, under present conditions, is the result of EXCHANGE (*q.v.*) Without exchange there could not, private property being understood to be established, be any conception of a joint income to be distributed. The value of the joint income reckoned in pounds sterling is merely the sum of the values of all the separate incomes, and without exchange these separate incomes could have no values to add together (see VALUE). The proportion of the whole income which falls to any man's share is determined by the value of his contribution to the production of that income, whether his contribution be work performed or the use of land and capital. This fact was so little recognised until recently, that James Mill and his son both thought it desirable to put distribution before exchange in their treatises (see Sidgwick, *Pol. Econ.*, bk. ii. ch. i. § 1).

For an account of the various theories which have been held respecting PROFIT, RENT, and WAGES, see these headings. For an explanation of the "wealth" the distribution of which is discussed in political economy, see WEALTH.

The word distribution is sometimes used by economists not in the technical sense dealt with above, but as equivalent to the process of conveying commodities from the producers to the consumers, and of dividing large quantities of a commodity into small quantities. See for example the long discussion on distribution in Malthus (*Pol. Econ.*, 1820, ch. vii. §§ 6, 7, 8, 9). This use of the word and kindred expressions is older than the technical usage. Lewis Roberts, in his *Treasure of Traffike*, 1641, speaks of "Commerce or Traffike which distributeth" the produce of a country "into forraigne parts." Adam Smith says that money "circulates and distributes" produce "to its proper consumers" (*W. of N.*, bk. ii. ch. ii.), and we still sometimes speak of merchants and retailers as "distributors," and of co-operative shopkeeping as "distributive co-operation." The kind of distribution contemplated in these modes of expression is a part of the process of PRODUCTION (*q.v.*) E. C.

DISTRIBUTION, ETHICS OF. The primary fact of economics is the production of wealth. The division of the product among those who create it is secondary in logical order and, in a sense, in importance. Yet the most important subject of thought connected with social economy is distribution. If the term be used broadly enough it designates all of the economic process that presents moral problems for solution. On the settlement of the ethical questions concerning the division of the social income depends not only the peace of society but the fruitfulness of industry. It is a striking fact that Ricardo, whose studies carried economic science forward in the direction of the truth concerning distribution, but stopped short of that goal, and so strengthened the hands of social agitators, realised the paramount importance of the subject on which his thought was chiefly concentrated: "To determine the laws which regulate this distribution," he says in his preface, "is the principal problem in political economy."

Scientific errors concerning the law of distribution react more harmfully on production than do errors of doctrine concerning production itself. Among self-asserting people, industry loses fruitfulness whenever the belief is widely diffused that products are shared according to an unjust principle. If it were a general conviction that social evolution is in the direction of iniquity,—that distribution already robs the workers and will rob them more hereafter,—no force could prevent a violent overturning of the social order.

Industry has its fruits and its sacrifices; it creates useful things at the cost of working and waiting. Where production is carried on in a collective way, both the products and the burdens of the process have to be shared by different classes of men according to some principle. The apportionment that has to be

made is not only of products, which represent positive values, but of sacrifices, which may be treated as negative values of a "subjective" kind. While the term distribution, as currently used, designates only the apportionment of the positive values, or products, it is capable of being used in a more complete sense, and made to include the apportionment of the negative ones also. It would then include all of economic science that involves moral problems.

Both parts of this twofold distributive process must in any case be studied if the ethical questions connected with industry are to be solved. There is no independent standard of justice in the distribution of products only. What a man ought to get out of the collective income of mankind depends on how much he or some one who represents him has sacrificed in helping to create it. The apportionment of the positive values referred to is inseparably connected with that of the negative values. Political economy must tell us how both products and burdens are actually shared, and ethics must tell us how both of them ought to be shared, if the existing plan of social industry is to be morally tested.

Political economy has not as yet furnished a theory of the actual distribution of positive values, or products of industry, that has met with general acceptance. It has scarcely attempted to furnish a theory of the distribution of the negative values. Ethical science has not furnished a clear standard of justice in the double apportionment.

Every producer experiences in his own person the double effect of industry; he is first burdened and then rewarded. The net effect of the two influences on the man's well-being may be termed the subjective resultant of production. A complete science of distribution must study the economic resultants in the case of different classes of men. How is a labourer on the whole affected by industry? What is the measure of the net benefit that comes to him from this source? How is a capitalist affected? How do the net effects compare with each other? What tendencies are at work to change the two, both absolutely and relatively? These are economic questions; while the ethical question is what the resultants in the two cases ought to be.

The personal resultant of industry is always a positive quantity. Work yields a net gain; the fruits of it are worth more than they cost. For the most hardly-used classes an industrial life is, by economic tests, more than worth living. The hours of labour in a day are increasingly burdensome as the period of work is prolonged. A man might labour three hours a day with little weariness and no injury. The eighth hour is wearying, and the tenth is more so. There comes a time at which work naturally stops, if the man is free, because working longer would cost more in the way of pain than it would secure in the way of pleasure. Final or marginal labour is that which just pays for the weariness that it costs. The gain that comes through labour offsets the burden that it entails at the point in the working day at which the burden is greatest. The less onerous labour of the earlier hours affords a net personal gain. If the man is paid by the hour he earns a part of his wages very easily. Intramarginal labour, as we may term it, affords a net subjective gain, what some would call PRODUCERS' RENT (*q.v.*)

Though the wages of all hours may be equal by money standards, they are of unequal utility to the man who gets them. His first earnings are spent on necessities, later ones on comforts, and final or marginal ones on things that figure in his estimate as luxuries. The last hour of his labour may ensure to him only the least important thing that he gets at all. It is the minimum benefit secured by an hour's labour that offsets the maximum sacrifice caused by it. There is therefore a second net gain coming to the worker in the spending of his money. As the sixpence or dime that is spent for a luxury benefits the man enough to offset the weariness of final or most fatiguing labour, those that are spent for food, clothing, etc., afford an additional benefit. The man enriches himself whenever he buys a loaf of bread. In general the sacrifices and the benefits of production just offset each other at the point at which the sacrifices are the greatest and the gains are the least. Everywhere except at the margin the gains are greater and the sacrifices are less.

Again the positive resultant of industry is increased by social organisation. Anarchy, even if it were peaceful, would increase sacrifices and diminish rewards. Whatever might be true of a sparsely settled world, a crowded world is dependent on the multiplying of productive power that combination brings. All classes are debtors to society. No serious case can be made against the existing social order on the ground that it lessens the gain that labour naturally brings.

The indictments brought against the social order are based on the comparative treatment that society accords to men of different classes. Are the benefits conferred on different ones what they ought to be relatively? Does society proceed capriciously in the allotment of rewards and sacrifices? Do some classes fail to get the proportionate benefit that is properly theirs? Are social tendencies in the direction of equity or away from it? These are the ethical questions to be solved by a comparison of the ideally just distribution with the actual one.

Of the ideals of distribution that have been advanced none has been crude enough to provide for the apportionment of the products of

industry and take no account of the burdens. A rule of equal rewards for unequal sacrifices would have no moral support. Ethical studies in this field really have as their object the attainment of a rule for adjusting what we have termed the personal resultants of industry, or a rule that, if followed in practice, would make the net effect of industry on the welfare of different classes equitable. Communistic theories make equality nearly synonymous with equity; but the thing that is to be equalised is seldom mere property or income. If the principle of equality be carried into refinements, so as to bring to one level the net benefits that society confers on all its members, the rule approaches, though it is still far from reaching, the ultimate moral ideal of distribution.

The better socialistic ideals are refinements of the rule of equality. In applying the rule to individuals, inheritance is the first disturbing influence encountered. The law of inheritance is based on a certain solidarity of families. Where it is in force the sacrifices of a parent may accrue to the benefit of a child. What we have termed the resultant of industry in the case of the heir to an estate is not to be measured by adding together positive values, represented by the enjoyments that the property brings, with negative values, represented by the inheritor's own sacrifices. If he be considered apart from his family the values in the case are nearly all positive. A crude levelling of individuals' net gains accruing from industry demands the abolition not only of inheritance, but of gifts from parents to children. Where it is advocated it is in the interest of purely individualistic equality.

The handing over of all capital to the state sweeps away even more completely inequalities of wealth in permanent possession. In theory it might avoid the evil connected with the abolition of inheritance, that, namely of reducing the capital that is necessary if wages are to be sustained at a high rate; since it is conceivable that the state itself might accumulate capital with needed rapidity. This measure also would, in effect, disregard the solidarity of families and tend to put men on a footing of individualistic equality.

Economic difficulties do not need to be considered in the shaping of a moral ideal. The vesting of all capital in the state would save the student of applied ethics one serious difficulty, that, namely, of determining whether the sacrifice of abstinence is unduly rewarded as compared with that of labour, or, in other words, whether interest is too high as compared with wages. A socialistic state has its moral duty simplified, since it has only to reward different kinds of labour equitably.

A scheme that is too crude to have much support makes the wages and the working hours equal for all. Estimate the wages in money or its equivalent, gauge labour by time only, and bring both to an equality in the case of the whole adult population. Even the rewards are not thus in reality equalised, and the sacrifices are very unequal. In real rewards unmarried men would be favoured and large families would suffer. The real sacrifices incurred would vary according to the nature of the work performed.

An improvement on this scheme provides a stipend for each dependent member of a family, and tries to equalise sacrifices by so reducing the number of hours of labour per day in occupations that are disagreeable or hurtful, as to bring all employments to a certain uniformity of burdensomeness. In the case of very disagreeable work the hours would be reduced to a minimum, while in occupations that are less and less repellent they would be shortened proportionately less. Production would of course suffer by this arrangement, and the ideal that the plan of division presents is that of small but equal pay, with easy work, for all.

Another scheme does not content itself with equalising what we have termed the personal resultants of industry, but aims to level inequalities of condition that lie at the back of industry itself. Society should do more for the lame and the blind than for those who have all faculties in possession, in order that the ultimate condition of all may be made as nearly equal as is possible. Here is the levelling policy in perhaps its most ambitious mood. It is not the treatment of men by society that is to be equalised, but the treatment of them both by nature and society. The industrial organism is to deal with its members unequally in order that it may somewhat neutralise the partiality of nature.

A rule of division that is often regarded as ethically lower than either of those above specified is that of compensation according to actual production. Give to a man the wealth that he creates, neither more nor less. Every one owns what he brings into existence; let not society wrest or filch from him any part of it. Let it keep itself clear from robbery and fraud.

If workers lived side by side in peaceful anarchy, with no division of labour and no exchanges, each man would get what he created. He would get little, but he would get all that would be his own. Introduce now a social union that multiplies products ten-fold but increases some men's returns only five-fold, and you seem to benefit these men and to rob them at the same time. If in organised industry some of the product that is distinctly attributable to labour itself finds its way into the hands of men who do not create it, the labourer suffers a wrong, even though the share that he still keeps may be larger by reason of the fact of his connection with the men who rob him. Such is the conception of industrial society that exists in many minds. The socialistic indictment

against society is that it filches from workers a part of their share of the *extra* product of industry due to organisation. Does society, under natural law, take from labour a product that is distinctly attributable to it? This is one of the most important questions in economics. A successful analysis of social production answers it. What needs to be known is what part of the composite result of industry is distinctly due to labour itself. In a land peopled by isolated producers and managing to live in peace, each man would get his own; does exchange vitiate this result? If so, organisation proceeds here on an unusual principle; since the complications of society as a rule disguise essential facts of primitive industry, but do not annul them. The presumption is that the man who got his own when he worked alone gets it when he trades with his neighbour on terms of genuine freedom, and that a true analysis of social relations will show the fact. If so, society tends actually to conform to the rule "to every man the product that is distinctly attributable to the sacrifices that he or others in his interest have made." There is common honesty in the distribution that takes place under natural law.

[The literature of the subject of economic ethics is not as scanty as it is one-sided. The basis of the socialistic movement is ethical, and much of its literature is designed to prove that society is organised on a plan that systematically wrongs workers in the apportionment of the social income. A defence would naturally aim to show that the law of distribution is not itself iniquitous, however many particular cases of injustice might arise under it. A weak point in the defence is the lack of a clear demonstration of the complete nature of the actual law of distribution, a lack that, as is hoped, may soon be supplied. In the meanwhile statistics are appealed to on both sides to prove, on the one hand, that the actual apportionment of wealth is departing more and more from the ideal standard, and, on the other, that it is tending towards it. For important socialistic arguments see Rodbertus's *Zur Erkenntniss unserer Staatswirthschaftlichen Zustände;* Marx's *Kapital*; and Louis Blanc's *Organisation du Travail.* For an argument aiming to prove that the private ownership of land involves progressive injustice in distribution see Henry George's *Progress and Poverty.* Of the numerous replies to this work, that contained in F. A. Walker's *Land and its Rent* may be specially mentioned. An historical treatment of this subject is found in Thorold Rogers's *Six Centuries of Work and Wages.* A theory of a law of utilitarian morality in economic evolution is presented in G. de Molinari's *La Morale Économique.* See also M. Minghetti, *Des Rapports de l'Économie Publique avec la Morale et le Droit* (Guillaumin et Cie). Many of the best studies of the favourable features of the existing mode of apportioning the social income are to be sought in the standard treatises on political economy mentioned in connection with article DISTRIBUTION, LAW OF (*q.v.*)] J. B. C.

DISTRIBUTION, LAW OF. The most important share of the income of society is the one falling to labour. The so-called "wage fund" theory accounted for the rate at which labourers are paid on the ground that wages come from a fund of capital devoted to this purpose, and that the rate per man depends on the size of the fund and the number of the claimants. The discovery of the fact that wages come from the product of industry, and not from capital, has made a new theory necessary, and has opened the way to the discovery of a general law of distribution.

The parties in the division of the general product of industry are—(1) those who contribute to production the element labour; (2) those who contribute instruments, or wealth in productive forms; and (3) those who bring labour and productive wealth into co-ordination by hiring both of these agents, and receiving and selling their products. The labour furnished includes the work of management, as well as other kinds of industrial effort; and the productive wealth, as the term is here used, includes land as well as other instruments. The co-ordinating function is, in this enumeration, kept distinct from the other two; the man who performs it is not to be treated in this connection as a labourer or as a capitalist, but as the employer of both labour and capital.

The shares to be accounted for are thus wages, interest, and pure profit, and these shares will include the rent of land and the wages of superintendence. The generic varieties of gain come from putting forth productive effort of some kind, from furnishing productive wealth in some form, and from bringing the effort and the wealth into co-ordination.

The scientific law of distribution determines what reward shall attach to the performing of one of these functions. It does not gauge the income of a particular man, since a man nearly always performs more than one function. A capitalist usually works, a labourer usually has capital, and an *entrepreneur*, or co-ordinator of labour and capital, almost invariably owns some productive wealth, and does some directive work. A scientific study aims to discover what determines the gain that attaches to the working, to the saving, and to the co-ordinating. As a man is a composite functionary, it tells us how much he naturally gets in each of his various capacities.

The Nature of the Distributive Process.—Social production is a synthesis of distinguishable elements. Distribution is an analysis; and it reverses the synthetic operation step by step. In organised production one worker does not complete a product from the beginning; if he applies his energy to crude nature and begins the making of something that the wants of society require, he passes the product in an incomplete state to a successor. This man

in turn advances the article nearer to completion and hands it over to a third man. The product, when ready for final use, has passed through the hands of a series of workers each of whom has put his touch on it and passed it to his successor.

The process may be represented by the following diagram :—

Synthesis resulting in the completed product, clothing.

1st Sub-Product. Elementary Utility. Wool.	2nd Sub-P. Place U. Transporting.	3rd Sub-P. Form U. Manufacturing.	4th Sub-P. Form U. Tailoring.
Resulting from the joint action of Capital and Labour.	Joint result of C′. and L′.	Joint result of C″. and L″.	Joint result of C‴. and L‴.

The garment, when completed, is an aggregate of distinct utilities, and we use the term sub-product to denote the quality imparted to it by each specific group of producers. The sharing of the value that a coat represents among the groups that have performed the specific operations of production is an analytical operation, that follows, in a reverse direction, the steps of the productive synthesis.

The first sub-product in the series is wool. It embodies an "elementary utility," or one that results from calling a raw material into existence. The merchant's sub-product is only the special utility imparted to the wool by conveying it to his warehouse, assorting it, and dividing it into quantities convenient for purchasers. It is mainly a "place utility," which is the service-rendering quality that a thing acquires by being taken to the place where it can be used; though in a complete statement it would be necessary to recognise a "form-utility" due to assorting and dividing. The manufacturer's sub-product is not the cloth, but the "form-utility" imparted to the wool by transmuting it into cloth. The tailor's sub-product is the further "form-utility" imparted to the cloth by making a coat of it. Each specific utility is created by the joint action of labour and capital; and each of these agents must have its share of the value embodied in its sub-product.

In order that the action of labour and capital within the sub-groups may be a joint-action at all, it is necessary that a certain co-ordinating act be done. Some one must hire labour of the right kind, borrow capital and invest it in the proper forms, and cause the two to co-operate. This is the work of the entrepreneur, in an unusually limited sense of the term. This functionary, in his capacity as entrepreneur, is not a capitalist and not a labourer, however frequently it may happen that the man who performs the co-ordinating function may perform others as well. The co-ordinator, as such, is not a business manager or superintendent. The performing of this function does not require salaried labour; indeed, after the process is begun, it scarcely requires effort at all.

Bargaining operations first divide the total product of industry among the general groups of which society as a whole is composed. How much wealth shall come to the entire group of workers, capitalists, and entrepreneurs who are engaged in the creating of the finished products, woollen garments? That depends on the price for which the garments sell. A myriad of finished products from other groups in the world at large must come, by way of exchange, to minister to the wants of the men in this one group; and the quantity and quality of those products is fixed by the sale of the clothing. This sale, and others like it, perform the first and most generic dividing act that takes place in the process of distribution. It determines the total income of those who contribute to the production of clothing.

What fixes the part of the income of this general group that goes to each of the sub-groups that compose it? Bargains again. Each group must buy the utilities made by those that come earlier in the series, and sell them, with the addition of its own utility, to the group that succeeds it. The manufacturing group buys wool and sells cloth; and what it receives, less what it pays, constitutes the reward of the manufacturing operation. As the first division of the income of society resolves it into rewards of general producing groups, the first subdivision resolves the portion falling to one general group into shares for the sub-groups that constitute it.

A further division is to be effected: it is that of the shares falling to labourers, to capitalists, and to entrepreneurs in each subgroup. Here is the test operation of distribution; in this smallest of fields is created and divided the wealth that rewards each class in industrial society.

The productive operation from the fruit of which labour and capital get their pay is *intra-groupal;* it goes on within the specific industry in which a particular force of men and their quota of capital are engaged. The value that rewards woollen weavers and spinners and the men who furnish them capital is created wholly within the mill, and the sum that is divided between these classes is a sum on which no others have any claim. Yet the fact that labour and capital both migrate freely from group to group, so that workers from any group are able to share in the special gains that may come to the earners in any other, creates a certain solidarity of labour on the one hand, and capital on the other. Give to the wool spinners an advance of wages, and movements of labour will in the end distribute the gain among the whole working class. On the

other hand, change the cardinal relations of labour and capital as a whole, and you change them in the end within every sub-group. Labour is in reality *trans-groupal*, and capital is the same. Each is a productive agent, the field of which extends directly across the sub-groups of the diagram. It is the relation of all capital to all labour that determines wages and interest. The law of wages is nothing if not general, and the same is true of the correlative law of interest.

It is a familiar fact that interest and wages tend toward uniformity in different occupations. Men of different productive powers may earn different rewards, even within a single trade; and the labour of management regularly receives more than work of the ordinary kinds. Men differ in the amount of working force that they possess, but men of like power tend to receive uniform wages throughout the series of industrial groups. If wages are high in the woollen mill the young men and women who are about entering the field seek out this part of it, and by their competition reduce the wages there prevalent to the rate that prevails elsewhere. Interest tends to a similar uniformity; under free competition it tends to keep the same rate in all industries.

With interest has often been vaguely grouped what we have termed pure profit itself; the gross gains loosely attributed to capital tend toward equality. It is, however, in a special way that the element that we have distinguished as pure profit tends toward equality in different industries. Wherever it comes into existence it sets at work forces that tend to sweep it again out of existence. In a way this gain is self-annihilating. The uniform rate toward which pure profit tends,—though it never reaches it in all groups at once,—is a zero rate. Here, indeed, we reach controverted ground, and can claim only to present one theory, not a view that has universal support; but the evidence in favour of the correctness of the view is simple and conclusive. Competition tends to annihilate pure profit. The existence in one sub-group of a gain that is in excess both of interest on all the productive wealth that is there used, and of pay for all labour, is an inducement to the entrepreneurs of the group to hire in the market both capital and labour, and secure the pure profit that their joint industry creates. Let woollen mills pay wages, including salaries, and a double interest on the capital that they use, and the mills will speedily enlarge their capacity. The increase in the product will then reduce the price of it, and ultimately bring the enlargement to an end. Under natural law the sub-groups are in stable equilibrium when, aside from insurance and taxes, each earns wages on all labour, including the labour of management, interest on all capital employed, and nothing more. On this point the testimony of experience confirms the conclusions of theory.

The equilibrium is never in practice perfect. Causes that cannot here be analysed in any fulness cause the element pure profit to continually reappear. Inventions, as applied in particular industries, give to one and another of the sub-groups a gain that is in excess of that which perfectly stable conditions would afford. The occupation of new land creates, in a local way, a pure profit for the earlier comers. Continually appearing in particular parts of the field, and slowly disappearing by reason of competition,—such is this element of the social income. If we watch a single sub-group we find the profit at intervals appearing and disappearing; if we watch the industrial field as a whole we find it everywhere present, though not long at the same points.

Pure profit depends on a relation between industrial groups. What the manufacturer pays to the earlier groups in the series above represented, and what he receives from the tailoring group, determine this part of his gain. The actual position of the entrepreneur himself, in the diagram that describes the sub-groups, is on the line that separates his own industry from the following one. He is a purchaser of everything that is produced on the left of that line. In the buying of materials he purchases the products of the earlier sub-groups, and in the paying of wages and interest he virtually buys the sub-product created in the group to which he himself belongs. The entrepreneur of the woollen mill buys wool, and so pays for the sub-products created by wool growers and merchants; and he buys the form-utility created in the woollen mill itself by making bargains with workmen and capitalists, giving them fixed sums, and inducing them to relinquish their claims on the cloth. As the place of a particular workman and of a particular amount of capital is, in the diagram, *intra-groupal*, so that of a particular entrepreneur is *inter-groupal*. Workers and capitalists get their pay from results secured wholly within their own industries, while entrepreneurs get theirs from the fruits of mercantile transactions between earlier groups and later ones. Pure profit does not depend on the relation between capital and labour. Moreover, where this profit exists it is local, it depends on the relations between adjacent groups.

We have shown that there is no law of wages that is merely local. There is no force that gauges the pay of wool-spinning independently of the wages paid in other employments. There is a level toward which all wages tend. There is likewise a level toward which interest in every group tends. What is the law that fixes these levels? What is the general law of wages and interest? Here again we are on ground that is actively contested, and we

therefore only indicate the nature of a certain theory without claiming for it a position of general acceptance, and without arguing any points in controversy.

In presenting it we may utilise a Ricardian formula for determining the rent of land. If we apply to a fixed area of land an increasing amount of labour, we get returns that diminish *per capita*. The first man set working on 100 acres creates a certain amount of wealth as the result of the tillage. Adding a second man does not double the crop. Adding a third does not increase by a half the product due to the former two. Each man, as he comes into the field, adds less to the total output of the industry than did any of his predecessors.

This hypothesis makes the men enter the field in a certain order of time, and the one who is the final man is so in a literal sense—he is the last to arrive. Actually putting the men into the field one at a time is not necessary in order to reveal the principle that governs the final productivity of labour. Let the full complement of men occupy the field at once, and there will still be what may be treated as the final increment of labour. Take any man away from the force that tills the field, and the remaining men will gain in *per capita* productivity by reason of his absence. The departure of one man out of a force numbering twenty does not reduce the crop by a twentieth, since the nineteen men remaining work at better advantage by reason of the withdrawal of one. The final productivity of labour is gauged by what would be lost if one man out of the force were to stop working. We may, by way of illustration, actually set the men working one at a time, and find what the last comer creates; or we may set them all working at once and see what would be lost by the departure of one. The conclusion is the same in either case: the final unit of labour is the least productive.

If, now, land were the only form of productive wealth that figured in the case, wages would equal the amount created by this final or twentieth man. That would gauge the amount that the employer would lose through the departure of any one man in the force. It would determine what he could afford to pay to any one. Each man tends to get what he is separately worth.

What would be true in the case of labour applied to land, and using no other capital worth considering, is actually true of labour applied to a fixed amount of general capital, or to a fixed quantum of wealth in all productive forms, including both land and other instruments. For the field of limited extent in the Ricardian illustration substitute a fixed value, expressible in pounds or dollars, and invested in such appliances of every kind as the needs of the working community require. If there are a hundred men in the force, the departure of one of them will not reduce the product by 1 per cent. His departure will add somewhat to the productivity of the remaining workers. After he is gone the capital will adapt itself in form to the needs of the ninety-nine, and it will be in a slight degree more ample in quantity per man. Wages are gauged, as in the former case, by the final productivity of labour. What on the whole is lost by the departure of one man fixes the importance to employers of every man. If each man gets what employers would lose by his absence, he gets what he is effectively worth.

This principle in a reversed application fixes the rate of interest. It is the productivity of the final increment of capital, as employed by a fixed labour force, that gauges the pay of each increment. Let there be 100 men using 100 units of capital. Take, now, one unit of capital away, and you will not reduce the product by 1 per cent. The 99 units of capital will have gained in productivity per unit in consequence of the departure of the hundredth. The loss inflicted on the entrepreneur by the withdrawal of the one unit of capital gauges the importance of any single unit. Each unit of capital gets as its compensation what would be lost if one unit of capital were withdrawn. This diminution of the total product due to the departure of the final unit of capital gauges the importance to the entrepreneur of each separate unit. It determines what he will pay for the use of each one. Interest is therefore gauged by the final productivity of capital. Each pound or dollar tends, under natural law, to secure for its owner what, in production, it is separately worth.

[For statements in harmony with this theory see J. B. Clark's *Philosophy of Wealth* and *Capital and its Earnings*, and Clark and Gidding's *Modern Distributive Process*. See also *Quarterly Journal of Economics* for April 1891.

For other views on the subject see F. A. Walker's *Political Economy*, and E. v. Böhm-Bawerk's *Capital and Interest*.—J. E. Cairnes's *Leading Principles of Political Economy*.—F. D. Longe, *Refutation of the Wage Fund Theory of Modern Political Economy*.—W. T. Thornton's treatise on *Labour*.—F. A. Walker's treatise on *Wages*.—Henry George's *Progress and Poverty*.—F. v. Wieser's *Natürliche Werth*, and the treatises of ADAM SMITH, RICARDO, J. S. MILL, JEVONS, CAREY, SIDGWICK, Marshall, A. C. Pigou, ROSCHER, WAGNER, KNIES, COHN, Schönberg, J. B. SAY, GARNIER, Gide, and others.] J. B. C.

DISTRIBUTION, USES OF THE TERM. In the early half of the 19th century English economists fell into the habit of grouping their subjects under three heads, of which Distribution and Production were almost always two, while the third varied (*Consumption*, James

Mill; *the Nature of Wealth*, Senior and John Mill). Adam Smith had not followed the physiocrats and Turgot ("Formation et Distribution de la Richesse") in giving prominence to the term, and he has often been accused of neglecting distribution in favour of production (see Sidgwick, *Pol. Econ.*, pp. 24-25). Ricardo, on the contrary, wrote to Malthus in 1820: "Political Economy you think is an inquiry into the nature and causes of wealth; I think it should rather be called an inquiry into the laws which determine the division of the produce of industry amongst the classes who concur in its formation. Every day I am more satisfied that the former inquiry is vain and delusive, *and the latter only the true object of the science*" (*Letters*, p. 175). John Mill (*Pol. Econ.*, 1848) lays stress on the difference which, he says, exists between the laws of production and the laws of distribution. The former are physical facts; the latter are of human institution solely. It has seemed to later economists hardly possible to assert the purely physical character of the first (see Mill himself, *Unsettled Questions*, p. 133) or the purely arbitrary character of the second, or generally speaking to consider distribution quite apart from production, consumption, and the nature of wealth. But it has seemed desirable to define the several distinct notions clearly, for the purpose of methodic investigation, and the question arises whether (*a*) distribution is to be detached from exchange and transportation, etc., or (*b*) is to be the genus of which they are species. The latter is the view implied in the common language of men. The dividend is sometimes conceived as the total wealth, sometimes as the total income of the country, the participants being the inhabitants. Distribution of wealth is perhaps less strictly a question for the mere economist than distribution of income. The narrower view (advocated amongst others by Prof. Walker, *Pol. Econ.* (London, 1888), pp. 31, 187-193, and by Ricardo in the words above quoted) is that distribution must be confined to the sharing of the product among the producers. It is urged again that it must not include mere transportation of goods, *e.g.* from the place where they are not wanted and not saleable to the place where they are both,—this being not a distribution but a completing act of production (Sidgwick, *Pol. Econ.*, p. 171, etc.) According to this view it would exclude many cases of exchange, for exchange might mean a transfer from producers to non-producers. On the other hand, John Mill expressly regards distribution as including exchange (which is simply distribution under competition, see *Pol. Econ.*, III. i. § 1), and certainly to Ricardo exchange and distribution were nearly convertible terms. Professor Marshall even devotes a special section to "value *or* distribution and exchange" (*Principles*, bk. vii.) Professor Newcomb (*Pol. Econ.*, II. ii. 61) avoids the term and describes the three operations needed to present the consumer with the finished article as production, transportation, and exchange. If we confine distribution to a sharing among producers, we find that we must (1) include those who are not producers in the ordinary sense of the word, *e.g.* landlords, and (2) we must exclude middlemen and retailers into whose hands the goods pass by exchange on their way to the consumer, and (3) we must nevertheless include labourers and capitalists who have bargained for parts of the product, as wages and interest. Exchange would thus be partly excluded, partly included; and we are made to realise the difficulty of separating in theory what is conjoined in practice. J. B.

DISTRIBUTION, COST OF. See PRODUCTION AND DISTRIBUTION.

DISTRIBUTION, STATUTES OF. These Statutes (22 & 23 Car. II. c. 10 and 1 Jas. II. c. 17) regulate the distribution of the residuary personal estate of a person dying intestate—not being a married woman. In case of the intestacy of a married woman the husband takes the whole residuary personalty for his own benefit. In all other cases it is divided as follows:—

1. The widow takes one-third if any descendants survived the intestate, and one-half if none survived.

2. The children and descendants of deceased children take two-thirds if a widow survived the intestate, and the whole if the intestate left no widow; the descendants of deceased children in each generation together take the share which their deceased parent would have had if he or she had survived the intestate.

3. The half remaining in the case of a widow but no descendants surviving the intestate, or the whole in the case of neither widow nor descendants surviving him, goes to his father, and if the latter does not survive him, to his mother, his brothers and sisters, and the children (but not the remoter descendants) of brothers and sisters, the mother and each brother or sister taking equal shares, and the children of a deceased brother or sister together taking the share which their deceased parent would have had, had he survived the intestate. If none of the relatives named survive the intestate the next of kin nearest in degree are entitled in equal shares. (See BEQUEST, POWER OF; DESCENT OF PROPERTY.) E. S.

DISTRIBUTION OF THE PRECIOUS METALS. On this branch of the theory of international trade the conclusions of the "older school" of economists are still, in the main, unshaken. Adam Smith's contribution to the general theory, although invaluable (see MERCANTILE SYSTEM), was largely negative. It is to his successor Ricardo that we owe the first clear statement of the principles which

regulate the territorial distribution of the precious metals (*Principles*, ch. vii. p. 77). "Gold and silver, having been chosen for the general medium of circulation, are, by the competition of commerce, distributed in such proportions amongst the different countries of the world as to accommodate themselves to the natural traffic which would take place if no such metals existed, and the trade between countries was purely a trade of barter." Notwithstanding modern developments of trade and credit, this dictum, slightly supplemented, still holds good. To realise its full meaning it is necessary to go back a stage, and to recall the principle which regulates international trade when carried on by barter (see BARTER). This has been stated by Mill (*Principles*, bk. iii. ch. xviii.) "The produce of a country exchanges for the produce of other countries at such values as are required in order that the whole of her exports may exactly pay for the whole of her imports." This law of international values applies also, without essential alteration, after the introduction of the precious metals, and one of the leading functions of money in international trade consists in adjusting temporary disturbances of the equation, since (Tooke, *State of the Currency*) "an increased export of ordinary commodities cannot always be made with the promptness which a sudden exigency may demand." There is general agreement among economists in regarding prices as being now the chief agent in effecting the movements of gold and silver, both between mining and non-mining countries, and between non-mining countries themselves. It is by successive waves of price that the gold of Australia and California is exchanged for the products of commercially related countries, and, through those countries, is further divided among the nations of the world; so that any alteration in the stock of one is ultimately felt by all (for the differences in the case of India in relation to this process, see Bastable's *Theory of International Trade*, p. 67). In view of the number and variety of influences affecting prices, the frequency of the transmission of gold and silver is thus largely accounted for. One of these influences—improvement in production—may be selected for reference, both on account of its increasing importance, and because it is a favourite illustration with writers on the subject. Thus Ricardo (*Principles*, p. 80, and frequently elsewhere)—"The improvement of a manufacture in any country tends to alter the distribution of the precious metals amongst the nations of the world." That this is so may be easily seen. Leaving out of consideration, as being sufficiently obvious, the effect, in attracting a flow of money, of the cheapening of commodities not previously exported (see Mill, *Principles*, bk. iii. ch. xxi.), we find that an improvement in a country's methods of production may have different results, according to the effect of the consequent cheapness upon the foreign demand. Unless that demand happen to be increased in proportion to the cheapness, there will be a movement of the precious metals in one direction or the other pending the re-adjustment of the disturbed international equation, and experience shows that, *cæteris paribus*, the influx is generally in the direction of the country which excels in manufactures. A national advantage in the production of commodities valued for export may have the same effect.

For the effect of improved banking facilities on distribution, see Lord Overstone, *Tracts, etc., on Metallic and Paper Currency*, p. 473 ff.

Recent improvements in foreign methods of production have been suggested as a possible partial explanation of the fact, of which there seems little room for doubt, that the quantity of gold in this country is now less than it was forty years ago (see Bibliography at end.) Far more powerful causes than this, however, may be found in the great developments which recent years have witnessed in our banking and credit system, and in other economising devices which have enabled a greater volume of transactions to be carried on upon a comparatively smaller metallic basis. The great disparity, for instance, between the amount of money per head of the population in the United Kingdom, in France, Germany, and the United States, is largely due to the difference in the habits of these nations in regard to banking and credit. The amount in circulation in 1912 was estimated as follows:—

Estimated stock of gold and silver, and actual amount of "uncovered" paper money on 31st Dec. 1912 in the United Kingdom, France, Germany, and the United States.

(The $ converted as 5 = £1.) *Annual Report* of the Director of the Mint (U.S.A.), 1913, pp. 64, 65.

IN MILLIONS OF POUNDS STERLING

Country.	Population.	Gold.
	Millions.	Millions.
United Kingdom . .	45	146·2
France	39	240·0
Germany	65	172·7
United States . . .	96	375·9

Country.	Silver.	Uncovered Notes.	Total Metallic Stock and Uncovered Notes.
	Millions.	Millions.	Millions.
United Kingdom	23·3	23·0	192·5
France . .	82·2	65·2	387·4
Germany . .	52·3	52·3	277·3
United States .	108·4	152·3	636·6

AMOUNT PER CAPITA IN STERLING.

Country.	Gold.	Silver.	Total Coin.	Paper.	Total Coin and Paper.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
United Kingdom	3 6 2	0 10 7	3 16 9	0 10 5	4 7 2
France . .	6 4 6	2 8 8	7 2	3 13 9	10 0 11
Germany . .	2 14 8	0 16 7	3 11 3	0 16 7	4 7 10
United States .	4 0 0	1 3 0	5 3 0	1 12 5	6 15 5

The fact of the use of two metals, in different countries, as standards of value, though of the utmost importance in other connections, does not necessitate any re-statement of the question, since it will be found that the movements of both metals are regulated by the same general laws (see Del Mar's *History of the Precious Metals*, p. 190). The influence of legislation upon the distribution of the precious metals is worthy of notice. The marked increase which recent years have witnessed in the proportion borne by silver to the total metallic stock of the United States is chiefly owing to this cause (see BLAND ACT), while the reform of the Austrian currency must alter, to some extent, the general proportions in which both gold and silver are at present distributed.

Circulation of gold, silver, and uncovered notes per head of the population in the various countries of the world for 1912. The statement, with those above, must be understood only as estimates (from United States Mint *Report*).

DOLLARS CONVERTED AT $5=£1.

Country.	Gold.	Silver.	Uncovered Notes.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
United Kingdom .	3 6 2	0 10 7	0 10 5	4 7 2
Australia . .	7 9 1	0 8 11	..	7 18 0
Canada . . .	4 4 4	..	2 13 7	6 17 11
India . . .	0 6 3	0 14 5	0 0 8	1 1 4
South Africa . .	1 19 5	0 13 8	..	2 13 1
Straits Settlements	0 10 1	0 14 2	0 10 3	1 14 6
Austria-Hungary .	1 4 6	0 12 7	1 3 3	2 0 4
Belgium . . .	1 13 8	1 3 6	0 7 10	3 5 0
Bulgaria . . .	0 9 2	0 4 6	0 9 3	1 2 11
Cuba . . .	2 16 0	0 0 11	..	2 16 11
Denmark . .	1 12 7	0 12 0	1 8 3	3 12 10
Egypt . . .	3 9 1	0 5 9	0 2 6	3 17 4
France . . .	6 4 6	2 2 8	1 13 9	10 0 11
Germany . .	2 14 8	0 16 7	0 16 7	4 7 10
Greece . . .	0 7 11	0 4 9	1 12 10	2 5 6
Haiti . . .	0 6 11	0 5 2	0 16 10	1 8 11
Italy . . .	1 9 3	0 2 10	1 1 6	2 13 7
Japan . . .	0 11 0	0 4 6	0 7 10	1 3 4
Korea . . .	0 1 3	0 1 1	0 2 2	0 4 6
Mexico . . .	0 8 6	0 15 3	0 13 11	1 17 8
Netherlands . .	2 10 0	0 19 10	2 0 6	5 10 4
Norway . . .	1 8 1	0 6 4	0 16 11	2 11 4
Portugal . . .	2 10 6	1 2 8	2 7 10	6 1 0
Roumania . .	0 18 1	0 7 1	1 9 3	2 14 5
Russia and Finland	1 18 7	0 2 7	0 19 9	3 0 11
Servia . . .	0 13 9	0 1 10	0 6 11	1 2 6
Siam . . .	0 0 0½	0 18 11	0 1 6	1 0 6
South America .	15 16 1	2 19 8	11 6 10	30 2 8
Spain . . .	1 5 9	1 16 6	0 19 9	4 2 0
Sweden . . .	1 2 7	0 6 4	0 18 8	2 7 7
Switzerland . .	2 9 11	0 17 2	1 12 10	4 19 11
Turkey . . .	1 4 6	0 4 7	..	1 9 1
Central America .	0 1 8	0 19 2	5 1 4	5 13 2
United States .	4 0 0	1 3 0	1 12 5	6 15 5

[See Ricardo, *The High Price of Bullion.*—F. A. Walker, *Money*, ch. iii.—"Movements of the Precious Metals," by J. Shillcock, *Journal Institute of Bankers*, vol. ii. p. 497. For statistics and estimates of production, distribution, total stock, coinage, and use in the arts of the precious metals, see Jevons, *Investigations*, p. 262, etc.; Palgrave, Appendix B, Third Report of Royal Commission on Trade Depression, 1886; Soetbeer, "Materials," etc., transl. in Appendix to Final Report of the Gold and Silver Commission, 1878; *Reports* of Deputy Master of the Mint, and *Reports* of Director of the United States Mint.] F. E. S.

[N. W. Senior, *Three Lectures on the Transmission of the Precious Metals from Country to Country*, 1827.—J. E. Cairnes, "The Australian Gold Episode" (in *Essays in Pol. Econ., Theor. and Applied*, 1873).]

The course of the distribution of the precious metals depends largely on the position of the producing countries. Thus in classical antiquity they moved from Asia Minor and Spain to Greece and Italy. The opening of the American mines in the 16th century gave a new direction to the monetary current which passed first to Spain and Portugal, to be thence distributed to the principal centres of European trade, outlying countries remaining long unaffected (Cliffe Leslie, *Essays*, 2nd ed., pp. 269-300). At present Australia, Canada, South Africa, the United States, Mexico, and South America are the sources of monetary currents that flow to the countries most closely connected by trade (see GOLD; SILVER). Of equal importance is the tendency—noticed by Pliny (70 A.D.), and still in action—of the precious metals to move eastwards, in consequence of the habits of hoarding produced by industrial insecurity. India has always been the chief recipient, her imports for 1853-1912 being:—silver, £519,846,000; gold, £305,858,000. She is believed to have taken about 28 per cent of the world's production of gold during 1912 and 1913; but the people are beginning now to use banks and investments, and the old hoarding habit shows signs of declining. China and the Dutch East Indies also absorb silver.

Besides these permanent movements, various agencies lead to temporary changes in distribution. Thus the AUTUMNAL DRAIN (*q.v.*) on the Bank of England is now well known, and the same phenomenon is noticeable in the United States, where "moving the crops" leads to a demand for increased currency in the West, and a corresponding drain on New York. Such internal fluctuations are paralleled by international movements. A bad harvest in England is one of the causes of a foreign drain, sometimes ending—as in 1847—in a crisis. More generally, any trade disturbance will show its effect in redistribution of the stock of bullion, an adjustment facilitated and carried out through the mechanism of the FOREIGN EXCHANGES (*q.v.*) Travellers may directly transport some portion of the money of the world, and governmental requirements may, apart from the exchanges,

lead to transfers of bullion as of other commodities (Clare, *Money Market Primer*, p. 109). State administrations often accumulate money in the process of collecting revenue, and further create hoards for military or other purposes, *e.g.* the German Treasure of £6,000,000 at Spandau. In some countries coin is locked up by the Treasury at times to a very large amount. The creation of central banks, on the other hand, has drawn a large proportion of the metallic circulation to a few points, and thereby — artificial restrictions apart—has made redistribution easier. The telegraph is an additional aid in securing speedy readjustment of the existing stock when required, and in connection with the refined system of the exchanges, and modern credit arrangements, reduces the need for money bullion to the minimum.

[G. Clare, *Money Market Primer*, London, 1891.—W. Jacob, *Production and Consumption of the Precious Metals*, 2 vols., London, 1831 (chs. iii. viii. and xiii. deal with movements of the metals).—A. Sötbeer, *Materials*, etc., trans. F. W. Taussig, in U.S. Consul's Reports, No. 87, Dec. 1887, pp. 515-528]. C. F. B.

DISTRIBUTIVE JUSTICE in political economy means justice in the distribution of wealth (see DISTRIBUTION, ETHICS OF). As to what constitutes a just distribution, opinions agree only in being chiefly of a negative rather than a positive character. The communist does not contend that perfect justice would be attained by his system of equality modified by differences of need, so much as that the injustice of the present great inequalities of wealth is obvious. The socialist says little about the distribution of wealth which would prevail if his arrangements for making the state the only proprietor of land and capital were carried out, but insists at length on the injustice of allowing private owners of property to enjoy a part of the produce of labour without having worked for it. The defender of private property seldom follows BASTIAT (*q.v.*) in maintaining that the present system is just, but contents himself with urging that the schemes of social reformers would be even less just. The ordinary person who has not thought much about the subject does not question the justice of the distribution which is the result of private property and exchange as a whole, but he is constantly denying the justice of essential parts of it. Compassion for poverty and sympathy with the worker as against the idler frequently lead him to deny the justice or fairness of perfectly honest and open bargains. Still more often it happens that self interest leads him to deny the justice of the existing distribution so far as he himself is concerned ; the widely-accepted maxim of distributive justice, "a fair day's wages for a fair day's work," is often understood by the employed as meaning a little more wages or a little less work, and by the employer as meaning a little more work or a little less wages, than the amount fixed by free competition.

Economists have usually declined to discuss distributive justice at any length, holding that it is a question of ethics rather than of economics (see COMMUNISM ; INDIVIDUALISM ; PROPERTY ; SOCIALISM).

[Cairnes, *Leading Principles*, pt. ii., ch. v.—Sidgwick, *Pol. Econ.*, bk. iv. ch. vi.—H. Rashdall, "What is Justice ?" in the *Economic Review*, October 1891 and April 1892.] E. C.

DISTRINGAS. A writ of distringas was formerly used for the purpose of protecting persons beneficially interested in stock standing in another person's name. This procedure does not exist any more, but a notice may now be sent to the bank or company in the books of which the stock in question is registered, accompanied by an affidavit stating that the person issuing the notice is beneficially interested in the stock. The bank or company to whom the notice is given, must, as soon as the person in whose name the stock is standing attempts to transfer the same, inform the person who issued the notice, who may thus take immediate proceedings to obtain an order of the court restraining the transfer. If no such restraining order be obtained within a week the transfer of the stock must take place. E. S.

DISUTILITY. See DISCOMMODITY.

D'IVERNOIS, SIR F. See IVERNOIS, Sir F. D'.

DIVIDEND ON STOCK AND SHARES.—The amount of interest or profit divisible among holders of stock or shares ; also the amount payable to each stockholder or shareholder.

Questions as to payment of dividends to shareholders in incorporated companies are frequently before the courts ; it is now a well-established principle that such dividends must be paid out of profits and not out of capital, and that any clause in articles of association authorising payment of dividends from capital or guaranteeing a certain rate of interest to the shareholders in all events is invalid and cannot be acted upon (*Trevor* v. *Whitworth*, Law Reports 12 Appeal Cases 409 ; *Guinness* v. *Land Corporation of Ireland*, Law Reports 22 Chancery Division 349. As regards railway companies and similar companies, see the Companies Clauses Act, 1845, § 121, and as regards companies governed by Table A to the Companies Act 1862, see Table A, Art. 73).

The rule that dividends must not be paid out of capital would, among prudent business men, be thought to involve the further rule that only so much of the profits is available for dividend as remains after making provision for depreciation in any of the assets in which a company's funds are invested. A rule of this nature is frequently contained in articles of association, or acted on by directors when the

articles are silent on the subject. In the absence of such a rule, the directors cannot, however, be compelled by dissentient shareholders to make such provision. The excess of money obtained by working the property of a company over the cost of working it may, in such a case, be divided among the shareholders, though the property itself is of a wasting nature—like a mine, a quarry, or a patent. It is also left to the discretion of the directors to decide what expenses are properly chargeable to revenue and what to capital (*Lee* v. *Neuchatel Asphalte Company*, Law Reports 41 Chancery Division 1; as to the desirability of legislation making it incumbent on directors to provide for depreciation of capital before paying dividends, see CAPITAL, *supra*, p. 221). In well-managed companies the directors provide that the valuation of the assets in the balance sheet is correct; which is not possible unless sufficient is taken from profits to provide for any depreciation.

Dividends in companies are not always paid *pari passu* to all shareholders. Companies frequently issue *preference* shares which receive a fixed percentage on their nominal amount, whilst the other shares, called *ordinary* shares, are entitled to whatever remains after payment of the preferential dividend. Dividends payable to preference shareholders must, like dividends on ordinary shares, come out of profits, and cannot therefore be paid when the profit is insufficient. It is generally stated in the articles whether preference shares are to be cumulative,—that is to say, whether a deficiency in dividend arising from insufficiency of profits in one year is to be made good out of profits of subsequent years, or whether preferential dividends are to be paid out of the profits of each year only — non-cumulative dividend. Should no special stipulation exist, dividends on preference shares in companies registered under the Companies Acts are cumulative (*Webb* v. *Earle*, Law Reports 20 Equity 556), but as regards railway companies and other similar companies governed by the Companies Clauses Acts, it is provided by Companies Clauses Act, § 121, that "if in any year ending on the day prescribed in the special act, and if no day is described, then on the 31st day of December, there are no profits available for the payment of the full amount of preferential dividend or interest for that year, no part of the deficiency shall be made good out of the profits of any subsequent year or out of any other funds of the company."

Railway companies have of late years frequently used a privilege conferred on them by the Railway Regulation Act, 1868, § 13, enabling them subject to certain conditions to divide the whole or a part of their ordinary stock into *preferred* and *deferred* ordinary stock. The dividend available for that part of the ordinary stock which has been so divided is apportioned as follows: the preferred stock receives a certain maximum dividend (generally six per cent), and any balance remaining over goes to the deferred stock. The latter is, of course, a habitual object of stock-exchange gambling, speculators always favouring securities liable to sudden rises and falls, and it can hardly be said that it was wise for parliament to create special facilities for speculative operations in railway shares, as such operations cannot fail to have an indirect influence on the management of the companies to which they relate.

Where dividends have been paid improperly to shareholders, the directors are liable to refund the amount out of their own moneys, and when the action has been brought before the 1st January 1890, they cannot plead any statute of limitations, being, in that respect, exactly in the same position as the trustees of a settlement or will who have committed a breach of trust (*In re* Sharpe, Law Reports (92) 1 Chancery 154).

As regards so-called "bonus dividends," see BONUS.

[Lindley, *Company Law.*—Buckley, *Companies Acts.*—Palmer, *Company Precedents.*—Hodges, *Railways.*—Browne and Theobald, *Law of Railway Companies.*] E. S.

DIVIDEND, MEDIÆVAL. One part or the other of an indenture or chirograph, a term confined to the practice of the exchequer. H. Ha.

DIVIDEND (IN BANKRUPTCY). The rateable share in money which a creditor who has proved his debts receives out of the proceeds of his debtor's estate is called a dividend. When the estate is a large one dividends are declared and paid from time to time as the estate is realised. When the assets do not exceed £300, the bankruptcy rules of 1886 direct that the estate shall, when practicable, be distributed in a single dividend. In other cases, under the Bankruptcy Act 1883, the first dividend is directed to be distributed within four months from the conclusion of the first meeting of creditors, and subsequent dividends at intervals of not more than six months (§ 58). Before the declaration of the final dividend, notice must be given to persons claiming to be creditors, but who have hitherto failed to establish their claims.

Unclaimed dividends are paid into a government account of the Bank of England called the "Bankruptcy Estates Account" (§ 162). M. D. C.

DIVIDEND WARRANT. A dividend warrant may be described as a cheque for the payment of a dividend. It may be crossed in the like manner as a cheque, and is in the main governed by the same rules. In one respect, however, it appears to be peculiar. When a cheque is payable to the order of two or more payees, it requires the indorsement of them all, but if a dividend warrant be payable to the

order of two or more payees it is the practice of bankers to pay on the indorsement of any one of them. This practice appears to have received legislative sanction, for § 97 of the Bills of Exchange Act, 1882, in terms provides that nothing in that act is to affect "the validity of any usage relating to dividend warrants or the indorsement thereof."

M. D. C.

DIVISIBILITY OF MONEY. DIVISIONS OF MONEY. The divisibility of the material of money is an important factor in its usefulness. It is essential that the mass should be readily divisible into parts, great or small, with exactness and without deterioration; and, again, that the sum of those parts, if re-united, should be equal in value to the original mass. The precious metals fully meet these requirements; and this quality, in addition to their other merits in respect of durability and portability, has secured for them their position as the money of civilisation. The divisions and subdivisions of money are both the cause and effect of the scale of prices. They have not in many cases been selected for theoretical appropriateness, but have been determined by practical convenience, to suit the habits of the people among whom they circulate. In these instances they bear some reference to the scale of ordinary transactions, but it will be found not unfrequently that the denominations and divisions of money have prescribed prices. Especially is this the case with fees for personal services, where neither the value of the thing done nor the cost of doing it can be stated with accuracy. Such are the fees current in the medical and other professions, which are quoted in guineas or half guineas; such also are the legal fees of 6s. 8d. and 13s. 4d., corresponding respectively to the "noble" and the "mark." In all these cases the rate of payment was prescribed by a denomination of money formerly in use, and the price has survived while the coin has disappeared. Another instance is to be found in the parliamentary railway fare of one penny per mile. At the time that this rate was fixed there was no experience as to the cost of carrying passengers, nor was any pretence made of apportioning the rate to the cost or value of the service performed. The selection was purely arbitrary, and was suggested by the existence of the coin. It would undoubtedly have been 20 or 30 per cent more—or less—had the subdivisions of the shilling been less or more numerous. So also with the penny post. This point is further illustrated by the different rates charged in different countries for international postage, where charges would be uniform but for the difference in the divisions of money. In five countries of the Postal Union, as shown below, the rates differ by as much as 12 per cent among themselves, ranging from 6 per cent above the English rate of 2½d. to 6 per cent below it.

	Equivalent of 2½d.	Rate Charged.	2½d. = 1000.
Germany	pfgs. 21·281	pfgs. 20	= 939
France	cents 26·272	cents 25	= 952
Holland	cents 12·595	cents 12½	= 993
Sweden	ore 18·916	ore 20	= 1057
Portugal	reis 46·918	reis 50	= 1066

Again, increase or reduction in small charges will necessarily follow the subdivisions of money. Thus fares by omnibus or tramcars have been not unfrequently reduced or raised *e.g.* from 2d. to 1d. or *vice versâ*, when there could be no ground for supposing that the cost of carrying a passenger had been reduced or increased by anything like 50 or 100 per cent.

R. W. B.

DIVISION OF LABOUR. By the "division of labour," or, as it is sometimes called, the "division of employment," is understood the separation of the total labour required for the manufacture of a single product into various distinct processes, and the allocation of each of these processes to a particular labourer or body of labourers. It is to be distinguished from the simple combination of labour, which consists in the massing together of homogeneous labour to produce a great effect. Thus in road-making, although a hundred men are employed to lay the metal on a road, there is no division of labour, while in the publication of a newspaper, where one man arranges the types, another classifies the material, another corrects the proofs, etc., there is division of labour. The phrase division of labour has become current through its use by Adam Smith in the famous chapters in which he opens the *Wealth of Nations* (bk. i. chs. i.-iii.)

Historically speaking, the division of labour commences with the specialisation of industries, and the specialisation of processes in the same industry, to which alone we strictly apply the term, is only an extension of the same tendency. In an early state of society each man is his own smith, clothier, armourer; he is farmer, hunter, fisherman, carpenter, all in one. The earliest division of labour is made when one individual devotes his whole time to some special work, such as boat-building, or the making of bows and arrows; and we may therefore say that it is coincident with the first creation of capital. (See Bagehot's *Economic Studies*, pp. 57, 58). To the specialisation of industry follows its organisation, viz. the formation of groups of labourers whose efforts are all directed towards the manufacture of one particular product. The organisation of industry leads necessarily to the division of labour, which indeed becomes in time the principal feature of that organisation. In a state of society where industry is very highly organised a single product is frequently the result not only of a variety of different processes

in one industry, but the work of a number of different industries also. Some of these are termed "subsidiary industries," (see Marshall's *Economics of Industry*, p. 52). In the manufacture of machinery a whole series of trades are employed, from the digging of the mineral to the finishing of the machine. This combination of industries is in reality division of labour in an extended form.

Of the consequences of the division of labour the most important is the increase in the quantity of work which it enables the same number of people to perform in the same amount of time. For this improved effectiveness of labour Adam Smith assigns three causes. (1) The workman acquires greater dexterity in his work, because it consists of some one simple operation, and he can therefore do it better and more quickly than if he had to vary his labour. In other words, he has constant practice, and therefore approaches nearer to perfection. It needs no illustration to point out the extraordinary degree of skill which continuous practice in any branch of human employment is known to confer. (2) The workman also saves time when he is entirely devoted to a single process, because he does not require to pass constantly from one place to another, or exchange one tool for another. Adam Smith also suggests that where the work is continuous the application of the labourer is greater than it is where he has to begin new work every now and then. (3) By the direction of his whole attention to a single operation, or a single process, the workman becomes so thoroughly familiar with it that any advantageous change in the machinery he deals with will naturally occur to him more readily than it does to those who have their attention divided between several items of labour. To these causes (4) increased aptitude and skill has been added. The recognition of this is generally ascribed to Mr. Babbage, though that author stated that he found it in a foreign work (see C. BABBAGE) on economics (Gioja, *Nuovo Prospetto delle Scienze Economiche*, Milan, 1815). Increased aptitude and skill is created by the specialisation of labour; it consists in the economy of work that is gained when each man is employed on the kind of labour he is best fitted for. Where a workman has two or more things to do, he will be less fitted for some than for others; but the concentration of his energies on one single kind of work enables him constantly to labour at the things he finds most suitable.

That the division of labour, from the above causes, increases the productivity of labour, and that very greatly, is not denied. It is urged, however, that there are counterbalancing results of the division, less direct perhaps than those above noted, but still traceable to it, which have an opposite effect on the productivity of labour; and this apart altogether from other advantages or disadvantages due to it. (1) Where labour is very highly specialised, the effect of perpetual concentration of the mind on a single operation is deadening to the mental faculties. We are all aware that variety of occupation produces a healthy state of mind, and that while perpetual practice of one thing brings about a kind of mechanical perfection, it has a deteriorating effect on the faculties in general. The principal way in which this consequence of the division of labour acts on its productivity, perhaps, is that it counterbalances to a large extent the probability of useful inventions which we counted among the results on the other side of the question. On the other hand, it is urged that work performed mechanically frees the mind and gives more time for thought. (2) A more important consideration, but one which affects not the labour of the individual so much as labour in the gross, is this—that the specialisation of labour of necessity involves the unsuitability of the average workman for any kind of work other than that he has been trained to. For example, suppose that a workman is employed on some small but delicate mechanical operation, which he has trained himself by long practice to perform with extraordinary celerity and accuracy. Some change in the market, or new invention, or development of mechanical science,—and where industry is highly organised all these causes are to be looked for—renders unnecessary the continuance of the particular piece of work he has hitherto done. Had he been in the habit of doing work in which there was variety or versatility, it would be much easier for him to turn his hand to something new; but in the highly-specialised condition of industry it is now unlikely that he will find any work corresponding to that he has been obliged to abandon. This disadvantage we may call want of elasticity of labour; and we may note that it tends to lessen the productive power of the total labour-force in existence. (3) Inasmuch as health and physical capacity are invaluable in their effect on the power of all labourers, anything which impairs or weakens the strength of the workman diminishes the efficiency of his work. The manifold division of labour has led in our time to the employment in the same business of far larger quantities of operatives than used to be massed together in Adam Smith's days. Therefore, though he states that "we can seldom see more, at one time, than those employed in a single branch," at the present time it is common to have all the branches of a great industry working together in the same place. For convenience' sake, this has led to the massing together of great populations in large centres of industry; and thus the conditions of life, as to health, have been rendered less advantageous to the labourers.

From these considerations it may be deduced

that while the division of labour increases to a great degree the productivity of labour, it has counterbalancing effects which modify the advantage. When we look at some of the other less obvious results of the division of labour, we see that it is in most cases open to argument whether they have a tendency to augment the net result of labour, or the reverse. We have already seen that the monotony of work which a great specialisation leads to must be regarded as an effect which modifies the advantages derived from long and continuous practice; and in its general influence on the workman we are bound to suppose it must have a tendency to impair his mental faculties. On the other hand, it is pointed out that concurrently with the progress of that specialisation, the labouring classes have attained to a continually higher standard of education, and to a greater development of mental power. This may be partly explained by the fact that another result of the specialisation of labour is that a greater and greater proportion of the total work done comes to possess in some degree the character of skilled labour; in other words, it makes demands on the mind of the labourer as well as on his body. Brute force counts always for less as the organisation of industry progresses, and the most striking example of this tendency which we see in our own day is the ever-increasing field for the work of women. The interdependence of industries is another consequence of which much may be said favourably as well as the reverse. When all farm labour is done by hand, movements in other branches of work can only very indirectly affect those engaged in agriculture. But when machinery is introduced for ploughing, reaping, etc., the business of farming comes to be intimately connected with ironwork, the making of machinery, and probably with the hewing of coal also. Therefore the cost of production to the farmer will be affected by inventions in machinery, by alterations in the wages of the classes of workmen who make machinery, and by variations in the price of coal and iron. The interdependence of industries, of which the above is a very obvious example, is a most important factor in modern life. On account of the hanging together in a greater or less degree of all trades, good or bad fortune has a tendency to visit all simultaneously. This interdependence also breeds a feeling of common interest among employers of all classes, and also between labourers on every field; with the result that we now see an increasing tendency, especially on the part of labour, to band its forces together for some general object, or for some special advantage. A universal strike in any large industry would paralyse the entire trade of the country.

The division of labour can be carried out much farther in some industries than in others; and, as Adam Smith points out (*Wealth of Nations*, bk. i. ch. iii.), it is only limited by the extent of the market. This latter consideration, however, is of very much less importance now than it was in the days when he wrote. The improvements in the means of transit made within the last hundred years have been so great as in large measure to abrogate the old limitations of market. The expenses and difficulties of land-carriage, which Smith notices, have been so greatly reduced that goods are constantly sent to market by long journeys across country. Still, in the smaller industries, it must always be the case that in a market where the customers can only be drawn from a limited area, the division of labour cannot be carried to any great extent. As among different industries, the division is generally carried out furthest where two conditions are satisfied: a large employment of workers, and the continued repetition of identical operations. In a small business it is clearly impossible to subdivide the work done very minutely. Where the same work can be done continuously, again, a greater division of labour is possible than where it has to be varied at different periods. Thus agriculture is an industry in which the division of labour can never be very greatly extended, because the same people, from the very nature of their business, must be employed in different operations at different seasons of the year. On the other hand, in a cotton factory, the division of labour is probably extended to its farthest possible present limits. These differences form one of the many causes which bring about the continuous flow of population in this country from rural to urban districts; a tendency which it is hopeless to check so long as we purchase food in great quantities from foreign countries with our manufactured goods.

It is noticeable that in retail trades, in which a vast quantity of capital is invested and a multitude of labourers employed, there does not appear to be as much scope for division of labour as in manufacture. Here the tendency is not for a particular retailer of goods to confine himself more and more to the sale of a special kind of article, but for large retailers to spread their business over as many commodities, and over as great a variety of commodities as possible; and by this means it would appear that retail trade is more remunerative when it is general than when it is specialised. The profits of the retailer depend less on the amount of work done by his workmen or the percentage of profits on the sale of goods than on the total number of sales he can make: what is commonly called his turn-over. Causes which in manufacturing industries increase the power and value of labour, therefore, have no such effect on the labour employed in the retail trade. With the retail trades must be classed

those great organisations called the carrying trades, which aim at the same object, viz. the bringing to market of goods already made.

[The question of the division of labour is discussed in all the standard English works on political economy. See also *The Economy of Machinery and Manufactures* by Babbage, chs. xix. to xxiii., where many interesting facts in illustration of the division of labour are recorded. The socialist point of view may be studied in *Capital*, by Karl Marx, translated into English by Samuel Moore and Edward Aveling, and edited by F. Engels, and in Hyndman's *Historical Basis of Socialism*. The most complete monograph on the History of Division of Labour is that by Schmoller in *Jahrbuch für Gesetzgebung*, 1889.] M. G. D.

DIZAIN, a coin struck in France in the reign of Charles VIII., worth ten deniers, and was also known as a Carolus. R. L.

DOBBS, ARTHUR (1689-1765), was the eldest son of Richard Dobbs of Castletown. He became high sheriff of Antrim in 1720, was member for Carrickfergus in the Irish parliament 1727-1760, and was appointed engineer-in-chief and surveyor general in Ireland by Walpole. His *Essay on the Trade and Improvement of Ireland* (Dublin, 1729-1731, 2 parts, 8vo, reprinted in Thom's *Collection of Tracts*, 1861, ii. 321, etc.) is full of valuable information on Irish trade and population drawn from official sources. He advocated a better system of land tenure. In 1732 he introduced an enclosure act in the Irish parliament (see Viscount Mountmorres, *Impartial Reflections on the Present Crisis*, 1796, 8vo).

[M'Culloch, *Literature of Political Economy*, 1845, p. 46.—*Dictionary of National Biography*, vol. xv. p. 132.—Appleton, *Cyclopædia of American Biography*, vol. ii. p. 189.] H. R. T.

DOCK.*

Development of the Modern Dock System, p. 611; London Docks, p. 611; Provincial Dock Development, p. 613; Warrants, p. 615; Effect of Economic Changes upon Docks, p. 615; Competition in relation to Docks, p. 621; Incidence of Dock Charges, p. 621; Dock Finance, p. 621; Dock Ownership, p. 621; Public Ownership, p. 621; (1) Management, p. 621; (2) Public Convenience, p. 621; (3) Finance, p. 621; List of Mercantile Docks in the United Kingdom, pp. 616-620.

Development of the Modern Dock System.—The first commercial dock in this country was the Howland Great Wet Dock at Rotherhithe, constructed in 1660 by private enterprise. This dock, known later as the Greenland Dock, now forms part of the system of the Surrey Commercial Docks. The earliest example in this country of a dock owned by a municipality is the harbour at Port-Glasgow on the Clyde, constructed by the municipality of Glasgow in 1662, on account of the distance of the usual port, Irvine, and the necessity of conveying merchandise for twenty miles by pack-horses (Deas, "The River Clyde," *Inst. of Naval Arch.*, vol. xxx. p. 20). The next important incident in dock history is the construction of the Mersey Docks in 1708. In 1665 the gross burthen of the 15 vessels that represented the shipping trade of Liverpool was 268 tons. At this time Liverpool possessed a natural harbour of about a mile in length, in a "small creek" off the north bank of the Mersey. The mouth of this pool became, in 1708, the first Mersey Dock—the Old Dock, now no longer in existence (Lyster, on "Recent Dock Extensions at Liverpool," *Inst. Civ. Eng.*, vol. c. pt. ii.). This dock was constructed by the Corporation of Liverpool (Rees, *Encyclopædia*, vol. xii., art. "Docks"). The condition of the great docks of the country was as follows (1911):—

London Docks.—The eight docks described in Table A are under the management of the Port of London Authority, established by the Port of London Act 1908. The docks generally, and the channels of approach to them, are entirely inadequate to their work, and considerable additions have been undertaken.

The Act of 1908 provides that, to enable the Authority to represent the varied interests concerned, it should consist of 28 members, of whom 1 is appointed by the Admiralty, 2 by the Board of Trade, 4 by the London County Council (2 being members and 2 not members of the Council), 2 by the Corporation of London (1 being a member, 1 not a member), 1 by the Trinity House, 18 being elected by the Payers of Dues, Wharfingers, and owners of River Craft, 1 member, however, being elected by Wharfingers only.

Besides the docks and warehouses, the Port of London Authority controls the waterway of the Thames from Teddington, practically to the Nore, a distance of 70 miles. The dock properties include a total area of 2583 acres, with a river frontage about 3 miles, 28 miles of quays available for shipping, and about 120 miles of railways.

The dock undertakings were purchased through the issue of Port Stock in exchange for the original stocks of the various companies; the amounts were (1920):—

3%	"A" stock (issued 1909)	.	£9,379,572
4%	"B" ,, (,, 1909)	.	13,210,706
3½%	Inscribed stock (issued 1911)		2,000,000
4½%	,, (,, 1913)		1,000,000
4%	,, (,, 1914)		1,000,000
5½%	,, (,, 1916)		500,000
5¾%	,, (,, 1918)		1,000,000

The total amount of Port Stock authorised was £32,647,156; a balance therefore remained of £4,556,647.

Since 1886 the growth in the size of the vessels using the Port has been continuous, and the tonnage of the shipping entering and leaving the Port of London from foreign countries, British possessions and coast-wise, in 1912, was 29,495,521 tons. A scheme for the development of the Port

Place.	Date.	Size of Entrance (Depth at H. W. O. S.T.)	Tonnage of Vessels.	Area of Docks and Basins. Acres.	Capacity of Warehouses, Vaults, etc.	Trade.	Lines of Ships and other Remarks.
				Total. Water Area.			
London Docks . .	1800	Wapping, 170′ long, 40′ wide, 23′ deep. Shadwell (Old), 180′ long, 45′ wide, 24′ deep. Shadwell (New), 35′ long, 60′ wide, 28′ deep. Hermitage (closed).	4500	100 40	Sheds and Warehouses. Storage Capacity, 174,000 tons. Wine, Spirit, and Oil Storage Vaults, 105,000 Pipes (Brandy Vaults, 4 acres). 132 Hydraulic and other Cranes (one of 25-tons lifting power).	Wool, Wine, Brandy, Sugar, Dry and Green Fruit, Ivory, Spices, Bark, Gums, Metals, Drugs, Iodine, Pepper, Rice, Coffee, Cocoa, etc.	By pumps the water is maintained at 3½′ above Trinity High Water Mark. African Ivory is dealt with to the value of £350,000. Wool is shown and stored, about 700,000 Bales passing through annually. 46 Wine and Spirit Vats (102,000 gall.) for blending purposes, and large bottling department.
New work . . .	*1911*	*"Tobacco" rebuilt, 60′ wide, 27½′ deep.*	..	..	*Two-storey jetty, 783′ × 192′ with two 2-storey transit sheds.*	..	*Pumping plant to raise water to 4½′ above Trinity High Water.*
St. Katharine Dock .	1803	180′ long, 45′ wide. Outer Sill, 28′ deep. Inner Sill, 24′ ,,	Coasting and Continental Services.	23 10	Sheds and Warehouses. Storage Capacity, 86,000 tons. Wine and Oil Vaults, 37,500 Pipes. 68 Hydraulic Cranes, etc.	China Tea, Wool, Marble, Bark, Gutta-percha, and India-rubber.	Lon. and St. Kath. Docks have Floor Area of 1,400,000 sq. ft. for wool. Some of the Warehouses (St. Katharine Docks) let to Apollinaris Co. and other firms.
E. India Dock . .	1790	Western, 210½′ long, 47′ 5″ wide, 24′ 10″ deep.	8000	71 33	Warehouses. Storage Capacity, 34,500 tons. Quays, 1½ miles.	..	Union Castle Line.
New work . . .	*1911*	*To be 80′ wide, 31′ deep.*	..	..	*Quays widened by 20 feet, new sheds.*	..	*Pumps to raise water 2′ above Trinity H.W.*
	1790	Eastern, 100′ long, 65′ wide, 31′ deep.		..	....	..	....
W. India Dock— W. India Import Dock W. India Export Dock S. W. India Dock and four adjoining basins	1799	Blackwall, 480′ long, 60′ wide, 30′ deep. South Dock, 480′ long, 55′ wide, 29′ deep. (Two others unused.)	7000	231 105	Warehouses. Storage Capacity, 195,000 tons. Vaults, 40,000 Puncheons. Cold Storage for 114,000 carcasses of Sheep. 4 miles of Quays for discharging.	Grain, Hops, Rum, Sugar, Butter, and Hard Wood (Mahogany, Walnut, Teak, etc.)	No. 10 Warehouse leased to Admiralty for Government Stores, Poplar Dock to North London Railway Co., for goods for rail transport. Vatting Floor, with vats from 160 to 140,000 gall. Total capacity, 58,530 galls.
Old Limehouse Basin and Lock reopened	*1911*	*New passage between South and Export Docks*	*for Barge traffic.*		*Quays widened by 55 feet: 5 large transit sheds.*	..	*Pumping Plant as in E. India Dock.*
Royal Victoria and Albert Dock	1850 and 1880	Bugsby's Reach, 325′ long, 80′ wide, 28′ deep. Galleons (Upper), 550′ long, 80′ wide, 30′ deep. Galleons (Lower), 550′ long, 80′ wide, 36′ deep.	12,500	767 182⅓	Warehouses, Sheds. Floor area, 71½ acres. Capacity, 281,000 tons. Cold Storage, 568,000 carcasses. Quays, 9 miles. 184 Hydraulic, etc. Cranes.	Grain, Tobacco, Frozen Meat.	Over 20,000 tons Tobacco in stock at one time. These docks are used by finest steamers trading with China, India, Australasia, United States, Canada, South America.
New Deep-Water Dock .	*1911*	*Entrance 800′ long, 100′ wide, 45′ deep.*	..	*64 (depth 35 feet)*	*Quayage, 9835′, 7 direct transfer Jetties, 43 Elec. Cranes, 1½ to 3 tons Capacity. Cold Storage, 250,000 carcasses.*	..	*Joined to Albert Dock by passage 100′ wide, spanned by large steel swing bridge. Electric pumps to keep water 2½′ above Trinity H.W.*
		Trinity High Water.					
Two Dry Docks . .	..	(1) Depth on Sill, 22′.	..	(1) Length 501′; width, cope 85′, entrance 66½′.			
	1911	(2) ,, ,, ,,		(2) Length 408½′; width, cope 77′, entrance 64½′, *extended to 575′ × 80′*			....
New Dry Dock . .	*1911*	..	..	*Length 800′ Width 100′*	....	..	....
				Total. Water Area.			
Tilbury Docks . . Main Dock with three branches	1888	700′ long, 80′ wide, depth sufficient to admit vessels of 25,000 tons.	Up to 25,000	591 71½	Sheds, etc., 23 acres, for 83,000 tons. Quays, 2⅔ miles. Town Warehouses. Cold Storage, 100,000 carcasses.	Silks, Carpets, Furs, Feathers, Drugs, Cigars, Frozen meat.	P. and O., Orient, Atlantic Transport, White Star, Clan, Anchor, and Bibby Lines.
Main Dock extended .	*1911*	..	..	..	*S. Quay extended 1600′. Sheds, 216,000 sq. ft. 2-storey Jetty, 1000′ × 50′. Elec. Cranes, 3 tons Capacity.*	..	*Further scheme adds 138 acres, new entrance lock, 1000′ × 130′, 43′ deep, 55′ water on sills. Riverside passenger stage, 1500′ × 80′.*
Two Dry Docks in further scheme							
		Trinity High Water Mark.					Can be divided by means of caissons to form smaller docks of varying lengths.
Two Dry Docks . .		(1) Depth on Sill, 35′.	..	(1) 850′ long, 70′ wide	The largest dry docks in the Port.		
	...	(2) ,, ,, 30′.		(2) 850′ ,, 60′ ,,		..	
				Total. Water Area.			
Surrey Commercial Docks (Greenland Dock). .	1660	Surrey Lock, 250′ long, 50′ wide, 27½ deep.	10,000	451 166	Timber-piling space, 200 acres. Timber shed, 48 acres, for 233,000 loads. Quays 6 miles, roads 8 miles. Accommodation for Canadian Produce, 2,000,000 cub. ft. Cold storage.	Soft Wood, Canadian Produce, Grain, etc.	New Cunard Liners to Canada. This dock is the chief depôt for the soft wood trade of London, about 780,000 loads being received for storage annually.
	(1904)	Greenland Lock, 550′ long, 80′ wide, 33′ deep. South Lock, 220′ long, 48′ wide, 27′ deep. Lavender Lock, 320′ long, 34′ wide, 18½′ deep.					
New work . . .	*1911*	..	..	..	*New Sheds and Cranes.*	..	....
Millwall Docks . .	1868	Limehouse Reach, 450′ long, 80′ wide, 28′ deep.	9000	233½ 35½	Granary, Floor area, 7 acres. Capacity, 120,000 qrs. Four nests of silos, capacity, 18,000 qrs. Pneumatic Machinery for discharging grain.	Grain	Important general trade from Baltic, N. and S. Europe, N. and S. America. Special feature is the Grain Trade, about 9,000,000 qrs. being discharged annually at this Dock.
		Trinity High Water.					
Dry Dock . . .	..	Depth on Sill, 20′.	..	450′ long, 65′ wide			
Dry Dock, enlarged .	*1911*	..	..	*to 550′ × 65′*	....		*Electric plant for pumping out dry dock.*

has been arranged to cost about £14,500,000, the first part now under construction (1911-14) costing about £5,000,000. Besides the additions described in Table A, an extensive dredging programme has been undertaken, widening and deepening all channels ; a large cold store, fitted with electric lifts, in Smithfield, for a further 80,000 carcasses, is added (total accommodation for frozen meat in London Docks approaches 1,350,000 carcasses) ; also two additional pneumatic grain elevators, 100 tons an hour capacity, with suction-pipes, etc., and large new Offices.

Provincial Dock Development. — While the dock system of the Thames was developing, that of the Mersey was growing rapidly. The growth of the cotton trade, and the increasing importation of American produce, especially wheat, stimulated the provision of docks and warehouses at the chief ports on the western sea-board. The Mersey and the Clyde became great industrial centres and great harbours.

Liverpool—The Mersey Docks and Harbour Board, formed by Act of 1857—consisting of 28 members, 24 elected by the Dock Rate-payers, 4 appointed by the Mersey Conservancy Commissioners (the First Lord of the Admiralty, the Chancellor of the Duchy of Lancaster, and the President of the Board of Trade)—controls the Port of Liverpool and Birkenhead.

The docks are equipped with very powerful modern appliances. Hydraulic power stations are placed at suitable centres, the power being used for opening and closing the dock gates, and for dealing with cargoes. Steam and electric power is also provided. The natural disadvantages of the river—*i.e.* the bar, and the immense rise of the tide, the total range between high and low water being as much as 33 feet on extreme spring tides and 11 feet on neap tides—have been met by very complete dredging appliances, by an immense floating landing-stage, nearly half a mile long, carried on iron pontoons, and held in position by bridges connected with the shore and stage by swivel joints and mooring-chains. The warehouses and sheds are a striking feature of the docks. Special warehouse accommodation for the storage of grain has been provided both at Liverpool and at Birkenhead. The wool warehouse will take 118,000 bales of wool, while the tobacco warehouse is probably the largest warehouse in the world. There are large cold storage depots. Tank accommodation is provided for the storage of petroleum. The railway facilities connect the great railway companies with the quays ; the Board also owns an extensive system of lines traversing and intersecting the dock estate in all directions. The port is used by all the great steamship companies—the White Star, the Cunard, Elder Dempster, Dominion Line, etc. In 1909 the number of vessels had risen to 24,799, with tonnage of 16,747,479, the total rates paid on vessels £730,469 : 17 : 7, and the rates and dues paid on goods £633,121 : 3 : 5. As regards export trade Liverpool stands without a rival in the Kingdom, as the following comparative figures of the values of exports for the year 1909 will show : Liverpool, £157,464,098 ; London, £120,545,867 ; Hull, £27,194,425 ; Glasgow, £27,023,646 ; Southampton, £26,710,818.

TABLE B.—MERSEY DOCKS.

	Dock Estate.	Water Area.	Lineal Quayage.	Depth of Sill.
Liverpool Docks—	Acres.			
60 Docks and Basins	1171¼	427 acres 2967 sq. yds.	26 miles 1466 yards	Varies from 2′ 6″ above to 20′ below O.D.S.
Birkenhead Docks—				
21 Docks and Basins	506	171 „ 3259 „ „	9 „ 1422 „	Varies from O.D.S. to 18′ 3″ below O.D.S.
Total . .	1677¼	599 „ 1386 „ „	36 „ 1128 „	
Liverpool Graving Docks . .		Length of Floor . . 10,147′ 2″		Varies from 3′ 1″ above to 16′ 2″ below O.D.S.
Birkenhead Graving Docks . .		„ „ . . 2,430′ 0″		Varies from 4′ 1″ to 7′ 8″ below O.D.S.
Total		. . . . . 12,577′ 2″		

New Docks are under construction. To provide accommodation for vessels of exceptional size (up to 1000 ft. in length) a Dock of large dimensions has been constructed, capable of being used as a graving Dock when necessary. The dimensions of the Dock are : length, 1020 ft. ; width, 120 ft. ; water area, over 3 acres ; depth of sill, 25 ft. below Old Dock Sill. The New Gladstone Docks are to consist of Half-tide Dock, 870 ft. long by 180 ft. wide, with a Sill 30 ft. below datum, a Lock, and two Branch Docks.

In 1919 the trade of Liverpool exceeded that of any other port in the Kingdom. The values of total exports and imports were as follows : Liverpool, £827,986,112 ; London (including Queenborough), £819,875,330 ; Hull, £148,023,115 ; Manchester (including Runcorn), £146,890,745 ; Southampton, £41,046,404 ; Glasgow, £110,248,762.

Manchester.—The Harbour and Port of Manchester was constituted by the Manchester Ship Canal Act 1885, and the Manchester Ship Canal Co. is the Harbour Authority of the Port. The Ship Canal was opened for traffic in 1894.

Manchester is now the second port for cotton in the Kingdom, the third fruit port, and the fourth in value of exports and imports. The traffic increased from less than 1,000,000 tons in 1894 to nearly 5,000,000 in 1911, and the revenue from less than £100,000 in 1894 to over £550,000 in 1910. The work

has been carried out under unexampled engineering difficulties and corresponding expense, greatly owing to the district which it serves being the most densely populated in England.

There are 21 Directors of the Company, 10 elected by the Shareholders, and 11 by the Manchester Corporation. The capital powers amount to £18,573,230, and the expenditure on capital account to June 30, 1910, £16,796,925.

The imports into Manchester are raw cotton (American and Egyptian), timber, grain, oil, fruit, frozen meat, wood pulp; the exports are—manufactured cotton, coal, agricultural machines, acids, and an enormous quantity of general merchandise.

The equipment of the principal docks at Manchester includes hydraulic, steam, and electric cranes of great power. Bonded warehouses are also provided.

TABLE C.—MANCHESTER.

(a) Principal docks at Manchester—9 docks (10th dock proposed). Dock estate, 406½ acres; water area, 120 acres; quays, 286½ acres, 6½ miles long.

(b) Runcorn (Bridgewater) Docks (including Small Graving Dock). Total area, 70 acres; water area, 15 acres; storage ground (in addition), 77 acres.

(c) Manchester Dry Docks Co. Ltd.—

1. 32½ miles from Manchester.
   Shipbuilding and Repairing Yards.
   Pontoon Floating Dock. 350 ft. long, 70 ft. wide, entrance 16 ft. deep; capable of lifting vessels of 2500 tons.
2. 2 miles from Manchester.
   Graving Dock. 535 ft. long, 65 ft. wide, 22 ft. water on the blocks.
   Dry Dock. 425 ft. long, 65 ft. wide, 18 ft. water on the blocks.
   Floating Pontoon. 260 ft. long, 63 ft. wide, 16 ft. water on the blocks; capable of lifting vessels of 2000 tons.

The Canal has its entrance at Eastham, 19 miles from the bar at the mouth of the river Mersey. It is 35½ miles long, and its depth, as well as that of the four large docks at Manchester, is from 26 to 28 feet. There are three locks at Eastham, forming three separate entrances by which access is obtained whenever the tide is less than 16 ft. 2 in. above the Old Dock sill. The principal docks (see Table C) at Manchester are 50 miles from the sea. The Company also owns the Runcorn Docks, shipbuilding and repairing yards, about fifty wharves and lay-byes situated at various points between Eastham and Manchester; besides these there are the Ellesmere Port Docks, the property of the Shropshire Union Railway (see Table E). There are oil tanks owned by various companies, with a total capacity of 26,912,282 gallons (99,119 tons), and large cold-air storage.

A grain elevator is situated on the canal, with storage capacity of 40,000 tons.

The Manchester Dock railways are 80 miles in extent and completely intersect the dock estate. The Ship Canal Company's railways, running alongside the canal, are connected with the other great railway companies of the Kingdom. There is also direct communication with fourteen other canal companies.

Clyde Navigation.—At Glasgow the trustees of the Clyde Navigation, by deepening the river-channel and erecting quays upon the banks, had practically converted the Clyde into a dock; but the extension of trade rendered necessary the construction of the Kingston Dock, 1867, Queen's Dock, completed 1880; and Prince's Dock, completed 1897. The combined area of these docks is 74 acres. The expansion of the mineral trade, in the importation of iron ore and the exportation of coal, also led to the construction of the Rothesay Dock, Clydebank, 6 miles below Glasgow, opened 1907 and having an area of 20½ acres. Special accommodation is provided for landing and housing cattle and storing timber, and a large granary has been constructed. The London and North-Eastern and London, Midland and Scottish Railway Companies have access through branch lines to the docks, and the trustees own about 36 miles of harbour railway on the street level. (See Table D.)

TABLE D.

Particulars as to Glasgow Harbour and Docks, 1911.

First Act for improving the River Clyde	1759.
First Act for improving the Harbour of Glasgow	1809.
First Act for making a Dock at Glasgow	1840.
Length of Quays	19,234 lin. yds.
Area of Quays, Roads, and Shed space	187 acres.
Area of Shed space	56¾ acres.
Area of Timber Yards	34 acres.
Area of Water Space	325 acres.
Amount of Parliamentary Borrowing Powers	£8,500,000
Amount of Debt	£6,979,868
Total Capital Expenditure to 30th June 1910	£9,298,587
Total Income of Trustees from 1752	£17,258,267
Income for year to 30th June 1910	£555,403
Depth of Water, at average Low Water Springs—In River	22 to 24 feet.
In Glasgow Harbour	16 to 23 feet.
In Docks	22 to 28 feet.
Rise of average Spring Tides—In River	10 to 12 feet.
In Glasgow Harbour and Docks	12 feet.

For a general description of the other docks of the country see Table E. This table gives a summary of the principal features of each of the docks described. We only regret that the limits of space compel the exclusion of many interesting details. Since the table was first compiled in 1892 much improvement has taken place in dock accommodation. Among these may be mentioned those carried out at Bristol, where the capital invested has increased nearly £4,000,000 within the last twenty years, and at Southampton, where the capital invested has increased over £3,000,000. On the Humber, new docks have been opened at Immingham (1912) and Hull (1914) in direct communication with the collieries of Derbyshire, Notts, and South Yorks, and are equipped for dealing with

the rapid shipment of coal, the equipment being largely electrical. At Cardiff the area of docks and basins has increased by nearly 100 acres and the capital invested by over £2,000,000. Very great improvements have been made on the river Tyne under the care of the Tyne Improvement Commissioners, who have spent nearly £7,000,000 on their work. They state, in their report, that "the river Tyne is the only port of refuge on the East Coast between the Humber and the Forth." The great improvement in the river has been accompanied by a vast increase in the industries carried on—shipbuilding and repairing, chemical works, iron and steel manufactories, hemp and wire rope works, potteries, etc. They add: "While Tynesiders now living can well remember the time when there were less than 7 feet of water on the bar at low water, there is now a depth approaching 25 feet at low water, shortly to be increased to 30 feet, and vessels of the largest class are enabled to enter and leave the port at almost any state of the tide." The docks belonging to the North Eastern Railway Company also provide accommodation for the timber traffic, the storage of grain, and other cargoes. On the Clyde the area of docks and basins has more than doubled since our statement in 1892, and the income has increased in fully the same proportion. In this connection we may mention that at Swansea the capital invested has increased from about £1,400,000 to over £4,000,000, while the area of docks and basins has grown from 60 acres to 126 acres. At Newport (Monmouthshire) the area of docks and basins has increased from about 56 to more than 150 acres; the South Dock, of 110 acres, being the largest single dock enclosed by artificial walls in Great Britain. Since 1892 the area of the docks and basins at Dover has increased from 17½ to 91 acres, and the docks at Fleetwood from 10 to 25 acres.

Dock Warrants.—Under this system goods may be "mobilised like money." Such goods are necessarily stored at great financial centres under the control of public bodies. See CLEARING SYSTEM; CONDITIONING; COTTON CLEARING; DOCK WARRANT; SAMPLING AND GRADING.

Effect of Economic Changes upon Docks.—Besides the general causes which affect the business of docks, certain special causes have had important influences upon them. Their influence varies with the nature of the trade of the port, and with the incidence of the dock charges. At Liverpool the incidence of the charges upon ships and goods was as follows in 1910:—Of a total of £1,290,000, dock tonnage rate was 45 per cent, dock rates 27 per cent, dues on goods 23 per cent, warehousing 5 per cent. At London, under the old system with which the arrangements of the Port of London Authority mainly coincide, warehousing yields 70 per cent and all other charges 30 per cent. Thus any changes affecting warehousing must have more important effects on Liverpool than on London. The warehouses in the Thames are not exclusively for goods in bond, but the system of warehousing grew up under a policy of protection, when articles now free of duty were taxed and stored, under the supervision of the customs, in the warehouses till the duty was paid. The facilitation of commercial intercourse makes warehousing less necessary and less profitable. Markets become more closely drawn together and more sensitive, and the risks and expense of prolonged holding of goods becomes out of proportion to the possible profits. Among the many economic effects of the opening of the Suez Canal were two in which docks were directly affected. The first of these was the impetus given to the building of steamers of large size, the great development of which has taken place since; the second, its influence on the entrepôt trade of Great Britain. The opening of the Canal reopened the direct trade routes between Europe and the East. This, with the development of international commerce resulting from various causes, enabled France and Germany to employ lines of steamers on direct routes between Continental and Eastern ports, and hence the entrepôt trade of London gradually diminished. Other causes also, for example the lowering of prices, have had the effect of stimulating direct communication (cp. Dep. Trade Com., *Report*, III. Q. 10,848). Of these the most potent was the expansion of trade, enabling the Continental ports to cultivate direct relations with the East. Navigation laws (of France and Spain, *e.g.*) have stimulated direct intercourse by granting bounties on ships and cargoes. Although from a national point of view the importance of the entrepôt trade may be exaggerated, and although at its highest point it was not more than one-sixth of the total import of foreign produce, yet the fluctuations in it affect London more seriously than any other port in the United Kingdom.

Notwithstanding this the imports of London, £205,639,879 in 1909, were the highest in the Kingdom, and the exports, £116,974,484, were second only to Liverpool.

Individual docks have been subject to the influence of changes in the technique of production. The alteration in the sugar trade through the extensive substitution of beetroot for cane-sugar seriously affected the revenue of the West India Docks, while the substitution of artificial alizarine, and of the aniline dyes for madder, cochineal, and other products, has led to the almost entire disappearance of these from the London import lists, and to the importation from Germany and France of their substitutes. These substitutes are mainly imported at the provincial ports, *e.g.* Hull, Newcastle, Harwich, and Leith.

TABLE E.—MERCANTILE DOCKS IN THE UNITED KINGDOM, 1911.

Place.	Form of Ownership.	Owners.	Date of First Construction.	Capital Invested.	Depth of Entrance.	Area of Docks and Basins.	Capacity of Warehouses, etc.	Principal Imports.	Principal Exports.
England & Wales.					Feet.	Acres.			
Barrow-in-Furness.	Joint Stock.	Furness Railway Co.	1867	Included in Railway.	31½ H.W.O.S.T. 24 H.W.O.N.T.	131½	3,252,800 cub. ft. Petroleum storage, 34,520 tons.	Timber, Grain, Coal, Iron Ore, Petroleum, Petroleum Spirit.	Steel Rails, Pig Iron, Iron Ore, Tin Bars, Ship Plates.
Boston.	Municipal.	Corporation of Boston & Harbour Commissrs.	..	£180,000	24¾ S.T. 18 N.T.	6¾	45,000 qrs.	Timber, Iron, Seeds, Granite, and Goods.	Corn, Coal, Machinery, Salt, and General Cargoes.
Bristol.	Do.	Corporation of Bristol.	1809	£5,999,957	46 H.W.O.S.T. 36 H.W.O.N.T.	144	18,820,526 cubic feet.	Grain, Oils, Seeds, Timber, Provisions, Tobacco, Sugar.	Iron and Steel Manufactures, Oil, Leather, Painters' Materials.
Cardiff.	Joint Stock.	Cardiff Railway Co.	1839	£6,833,300	42 S.T.	200 inc. Timber Ponds.	6,000,000 cubic feet or 120,000 tons.	Timber, Grain, Fruit, Provisions, Foreign Meat, Iron Ore, Pitwood, etc.	Coal, Patent Fuel, Iron and Steel, and General Merchandise.
Do., Barry Docks.	Do.	Barry Railway Co.	1889	..	49⅜ H.W.O.S.T. 13½ L.W.O.S.T.	114	6 acres.	Pitwood, Grain, Timber, Building Materials, and General Merchandise.	Coal.
Dover.	State.	National Property. Dover Harbour Board.	..	..	Granville Dock, 15 N.T., 20 S.T. Wellington D'ck, 9 N.T., 14 S.T.	91	..	Coal, Timber, Grain.	Chalk, Oil.
Falmouth.	Joint Stock.	Public Works Loan Board & Mortgagees.	1862	£234,000	22 ft. low water.	42	50,000 cubic ft.	Coal, Timber, Wheat, Barley, Maize.	Granite, China Clay, Old Iron.
Fleetwood.	Do.	Lancashire & Yorkshire Rly. Co.	1877	..	..	25	Elevator, 30,000 tons; sheds, 6000 tons.	Grain, Timber, Iron Ore, Esparto Grass, Dyewoods, Stone, Steel Rails, Ice, Potatoes, Fish, Cement, and Slates.	Coal, Coke, Salt, and Grain.
Garston Docks.	Do.	Lond. & North-Western Rly. Co.	Old Dock, 1864 North Dock, 1875 Stalbridge Dock, 1909.	..	Old Dock, 25 S.T., 15 N.T. North Dock, 28 S.T., 18 N.T. Stalbridge Dock, 35 S.T., 25 N.T.	28½	W'houses, floored berths for 100,000 tons minerals, 48 ac. timber storage, 70 m. railway siding.	General.	Coal.
Goole.	Do.	Undertakers of Aire & Calder Navigation Co.	1820	..	22 S.T.	33¾	..	Timber, Grain, Ore, Oil, Logwood, Sugar, Groceries.	Coal, Stone, Machinery, Textiles.
Great Grimsby.	Do.	Great Central Rly. Co.	1846	£3,000,000	26 H.W.O.S.T. 22 H.W.O.N.T.	104¼	Sheds and warehouses, 582,750 sq.ft., 68,450 qr. grain w'house.	Fish, Timber, Grain, Butter, Wood Pulp, Iron Ore, General Goods.	Coal, Pig Iron, Manufactured Goods.
Great Yarmouth (proposed).	Local Public Trust.	Port and Haven Commissioners.	1911	Estimated £100,000 to £120,000	12 L.W.	16	..	..	Fish.
Hartlepool and West Hartlepool.	Joint Stock.	North-Eastern Rly. Co.	1835	..	26 H.W.O.S.T.	200	160,000 qr. grain, storage ground 120 acres.	Ore, Timber, Grain.	Iron, Coal, General Goods.
Harwich, Felixstowe (Customs' Port of Harwich).	Public Company.	Felixstowe Dock and Railway Co.	1887	£130,000 Shares £22,500 Deb. Stock	15½ L.W.S.T. 27½ H.W.S.T.	Docks 5½.	Warehouses let to Private Firms. Length of Quays 600 feet.	Coal, Roadstone, Grain.	Flour, Malt, Old Iron.

Hull.	Joint Stock.	North-Eastern Railway Co.	1774	..	Varying from 29 H.W.O.S.T. downwards.	156	250,000 qrs. wh't, 100,000 carc. frozen mutton.	Grain, Seed, Hemp, Flax, Fruit, Timber, Iron, Fish, etc.	Chemicals, Coal, Coke, Jute, Linen, Machinery, Oil, Oilcake, Paint, Woollen Manufactures.
Do.	Do.	Hull and Barnsley Railway Co.	1885	Included with Railway.	34 H.W.O.S.T.	58½	..	Butter, Lard, Eggs, Bacon, Fish, Sugar, Grain, Seed, Timber, Wool.	Coal, Coke, Cotton and Woollen Manufactures, Iron and Steel Manufactures, Machinery.
Do.	Do.	North-Eastern and Hull and Barnsley Railway (Joint).	1914	Included with Railway.	Outer Sill 42′ 3½″ Inner Sill 39′ 3½″ H.W.O.S.T.	Water 90 [1]	Coal-hoists, etc., 5000 tons an hour capacity. Grain silo, 40,000 tons. Oil tanks, 500,000 gallons, etc.	Frozen Mutton, Grain, Oil, etc.	Coal, Iron, etc.
Immingham.	Do.	Humber Commercial Railway and Dock Co.	1907	£1,800,000	47 H.W.O.S.T. 27½ L.W.O.S.T.	Water 45 Quayage Length 5400′	170 miles rail sidings for 16,850 coal-trucks. Coal-hoists, 5600 tons an hour capacity. Grain elevator, timber pond, etc.	Grain, Timber, etc.	Coal, Iron, etc.
Ipswich. [2]	Local Public Trust.	Ipswich Dock Commissioners.	1837	£175,000	23½	29¾	50,000 qrs.	Timber, Grain, Oil, Seeds, Pyrites, Phosphates.	Agricultural and other Machinery, Artificial Manures, Malt.
King's Lynn.	Statutory Company.	King's Lynn Docks and Railway Co.	1869	£460,639	29½	*Water* 17 *land* 80	40,000 tons.	Grain, Cake, Timber, Ore, Sugar, etc.	Pig Iron, Iron Ore, Coal, etc.
Lancaster.	Local Public Trust.	Commissioners and Trustees of the Port.	1787	..	20 O.S.T. 14 O.N.T.	2	None.	Timber, Clay, Corn, and General.	Coal.
Liverpool and Birkenhead.	Do.	Mersey Docks and Harbour Board.	..	*See Table B*	..	..	..	..	..
Llanelly North Dock.	Do.	Llanelly Harbour Trust.	1903	£142,835	22 to 27	10	8000 sq. ft.	Timber, Pitwood, Pig and Scrap Iron.	Tin-plates, Coal (Anthracite and Bituminous), Tin-stampings and Tin enamelled goods.
Carmarthenshire Dock.	Do.	Do.	..	..	..	1¾	..	..	..
"Copper-Works" Dock.	Leasehold.	Messrs. Nevill, Druce, and Co.	1820	£25,000	Side walls 25 S.T. 21.	61,015 sq. ft.	18,500 sq. ft.	Scrap Iron for Steel Works, Pig Iron, Copper Ore.	Coal, Tin-plates, Manufactured Copper.
Burry Port Dock.	Joint Stock.	Burry Port and Gwendraeth Valley Railway Co.	1834	£208,000	22 S.T.	17	1800 sq. ft.	Copper Ore, Pitwood.	Coal, Bricks, Clay, Tin-plates, Copperas.
Dock (G. W. R.).	Do.	Great Western Railway Co.	1833	Included in Railway.	16	120,000 sq. feet	Two warehouses total 4300 sq. ft.	Iron and Timber.	Coal and Tin-plates.
London.	Local Public Trust.	Port of London Authority.	..	*See Table A.*	..	..	..	..	..
Lowestoft.	Incorporated Co.	Great Eastern Rly. Co.	1850	..	15 to 16 H.W.	58	382 square yards.	Fish, Steel Rails, Timber, Stone, and Coal.	Herrings.
Manchester.	Manchester	Corporation and Manchester Ship	Canal Co.		*See Table C.*	..	..	..	..
Maryport.	Local Public Trust.	Maryport Harbour Commissioners.	1857	£291,591	25	20	Small.	Timber, Grain, Ore.	Coal, Steel, Pig Iron, Creosote Oil, Pitch.
Middlesborough.	Joint Stock.	North-Eastern Rly. Co.	1842	..	27 to 32	25½	2500 qrs. grain or 600 tons goods. Storage ground 14 acres.	Timber and Iron Ore.	Machinery, Chemicals, Manufactured Iron and Steel, etc.
Milford Haven.	Do.	The Milford Docks Co.	..	..	34 H.W.O.S.T.	48	Extensive warehouses.	Fish.	Coal, Transatlantic Traffic.

[1] When complete.

[2] Proposed Improvements (1911): Construction of new Entrance Lock, depth on sill 17½ feet L.W.S.T., and new Entrance Basin, 3½ acres.

TABLE E.—MERCANTILE DOCKS IN THE UNITED KINGDOM, 1911—*Continued.*

Place.	Form of Ownership.	Owners.	Date of First Construction.	Capital Invested.	Depth of Entrance.	Area of Docks and Basins.	Capacity of Warehouses, etc.	Principal Imports.	Principal Exports.
					Feet.	Acres.			
England & Wales—*continued.*									
Milford Haven. Briton Ferry.	Joint Stock.	Great Western Rly. Co.	1861	..	27 Highest S.T. 14 Lowest N.T.	13	None.	General Iron, Iron Ore, Timber, Stone, and Sundries.	Coal, Copperas, Bricks, and Sundries.
Newcastle-upon-Tyne.	Local Public Trust.	Tyne Improvement Commissioners.	1850	£6,778,377	25-30 L.W.O.S.T.	..	3 docks (including Sth. Shields Tyne Dock) and extensive coal shipping accommodation.	Iron Ore, Burnt Ore, Sulphur Ore, Provisions, Fruit, Grain and Flour, Steel and Iron, Lead, Nitrate of Soda.	Coal and Coke, Chemicals, Fire-bricks and Clay Goods, Manure, Flour and Meal, Pig Iron, Steel and Iron, Lead, Lead Colours, Sheet and Pipe Lead, Purple Iron Ore, Grindstones.
Tyne — Northumberland Dock.	Do.	Do.	1857	£1,787,526	19 H.W.O.N.T. 24 H.W.O.S.T.	52¼	30,800 sq. ft.	Pit Props, Mining Timber, Deals, Battens and Boards, Grain, and Nitrate of Soda.	Coal and Coke, Bricks, Chemicals, Pig Iron, and Machinery.
Albert Edward Dock.	Do.	Do.	1884		25 H.W.O.N.T. 30 H.W.O.S.T.	25	Grain and general warehouse, 20,000 sq. ft. floor area, 6 floors and cellarage, sheds, 20,000 sq. ft.	Do.	Do.
South Shields Tyne Dock.	Railway Co.	North-Eastern Rly. Co.	1859	..	27 to 33	60	100,000qrs. grain, 2000 standards wood. Storage ground.	Grain, Timber, Ore, Esparto, Wood, Pulp.	Coal, Chemicals, Iron, Bricks, Fire Clay Goods, and Zinc Ore.
Newport.	Public Co.	Alexandra (Newport & South Wales) Docks & Railway Co.	1842	..	Average 35 S.T.	Water 150¼	Length of quays, 22,275 ft. Extensive warehouses. Coal-hoists, timber-float, etc.	Iron, Ore, Timber.	Coal, Iron, Steel, Tin-plates.
Penarth (Cardiff).	Joint Stock.	Taff Vale Railway Co.	1865	£1,250,000	40	26	2500 sq. feet.	Timber, Wood, Pulp, General.	Coal.
Penzance.	Municipal.	Mayor, Aldermen, and Burgs. of Penzance.	1879	£69,000	21½	3½	Adequate.	Coal, Timber, Salt, Flowers, Potatoes, and General.	Tin, Copper, Fish, China, Clay.
Plymouth.	Local Public Trust.	Plymouth Harbour Commission.	..	..	..	200	..	Nitrate of Soda, Guano.	General.
Runcorn, Ellesmere Port.	Joint Stock.	Shropshire Union Rly.	..	..	..	3½	..	..	..
Do. Bridgewater Docks.		See Manchester Ship Canal (*Table C.*).							
Seaham.	Public Company.	Seaham Harbour Dock Co.	1830	£495,000	North Dock, 16 S.T., 13 N.T. South Dock, 25 S.T., 22 N.T.	Docks, 13½ Outer Harb'r, 15	None.	Timber.	Coal, Glass Bottles.
Sharpness, Gloucester.	Joint Stock.	Sharpness New Docks Co.	1827	£1,272,669	15 to 34	34	2,200,000 bushels.	Timber, Grain, Slates, General Merchandise, and Sugar.	Coal, Salt, Earthenware, General Merchandise.

Silloth.	Do.	North British Railway Co.	1859	(New Dock) £90,000	24 S.T.	Dock, 6 acres. Basin, 4 acres.	Grain warehouse 1700 sq. yds. floor space.	Grain, Timber.	Flour and General Goods.
Southampton.	Do.	London & So.-Western Railway Co.	1844	£4,524,000	18 to 40 L.W.O.S.T. 28 to 53 H.W.O.S.T.	60¼ land, 172 water.	Warehouses on all the quays.	Coffee, Wines, Spirits, Grain, and Timber.	Machinery, Manufactured Goods.
Southwold.	Private enterprise.	William Robert Fasey, Leytonstone, Essex, Contractor.	Ancient harbour reconstructed 1907.	About £80,000.	10 low water.	8 acres dock, also river.	..	Fish, Coals, Granite.	Cured Herrings, Shingle, Timber.
Sunderland.	Local Public Trust.	River Wear Commissioners.	1850	£1,428,451	28	86	45,000 qrs. grain, 600 tons esparto.	Timber, Grain, Iron Ore, Esparto, Petroleum.	Coal, Coke, Patent Fuel, Marine Engines, Ships.
Do., Wearmouth Dock.	Railway Co.	North-Eastern Railway Co.	1838	..	22	6	None.	Not Important.	Not Important.
Swansea	Local Public Trust.	Swansea Harbour Trustees.	1851	£4,048,300	..	126, Float of 120 acres. Quay 32,200′.	882,076 sq. ft.	Timber, Grain, Mineral Ores, etc.	Copper, Coal, Coke, Patent Fuel, Tin-plates and other Metals.
Whitehaven.	Local Public Trust.	Whitehaven Harbour Commissioners.	1708 1894	£260,620	20 O.S.T. 14 O.N.T.	Dock, 4⅜. Tidal harbo'r, 44¾.	No lock-up warehouses.	Coke, Cattle, and General.	Iron Ore, Steel Rails, Quarry Stone, and General.
Weston Point Docks.	Do.	Weaver Trustees.	1813	£184,000	16 O.T., 18 S.T.	6	20,000 tons, wharves 40,000 tons.	Clays, China, Stone, Bone Ash, Flints, Macadam.	Salt, Chemicals.
Widnes Dock.	Joint Stock.	Lond. & North-Western Rly. Co.	1830	..	15½ S.T., 7 N.T.	1½	Traffic direct from ship to wagon.	Copper and Sulphur Ores, White Sand.	Chemicals, Manufactured Manure, and Coal.
Workington.	Harb'r Board.	Workington Harbour and Dock Board.	1864	£100,000	21 O.S.T.	4½	In dock 300 tons, in harbour 250 tons.	Coke, Ore, General Cargoes.	Coal, Rails, Pig Iron.
Berwick-on-Tweed.	Local Public Trust.	Berwick Harbour Commissioners.	1876	£61,000	14 N.T. 21 H.S.T.	3½	800 tons coal hoist.	Timber, Manure, Esparto Grass, China Clay.	Coal, Fish, Grain, Manure.
Scotland.									
Aberdeen.	Local Public Trust.	Aberdeen Harbour Commissioners.	1775	£1,669,984	26	84	Total floor area, 10,180 sq. yds.	Coal, Fish, Timber, Flour, Salt, Linseed, Rapeseed, Cottonseed.	Fish, Granite, Oats, Paper, and Cattle.
Alloa.	Joint Stock.	North British Railway Co.	Purchased by Rly. Co., 1891	..	18 S.T.	3	12,540 cubic ft.	Timber, Grain.	Coal.
Arbroath. [1]	Local Public Trust.	Arbroath Harbour Trustees Board, 1839.	1394 [1] 1740	£70,000	15 O.S.T. 11 O.N.T.	2½	480 tons flax.	Flax, Hemp, Coal, Foreign Timber, and Slates.	Grain, Potatoes, Home-grown Timber, Herrings.
Ardrossan.	Joint Stock.	Ardrossan Harbour Co.	Early 19th century.	£399,999	27 H.W. 18 L.W.	18½	One bonded warehouse.	Iron and other Ores, Timber, Limestone, Nitrate of Soda.	Coal, Slag, and Steel Products.
Ayr.	Local Public Trust.	Ayr Harbour Trustees.	1878	£448,279	21	8	None.	Iron Ore, Limestone, and Timber.	Coal, Iron, Produce.

[1] The original harbour was constructed about 1394 by the Abbot and Monks of Aberbrothock; new harbour, by Town Council, about 1740.

TABLE E.—MERCANTILE DOCKS IN THE UNITED KINGDOM, 1911—*Continued.*

Place.	Form of Ownership.	Owners.	Date of First Construction.	Capital Invested.	Depth of Entrance.	Area of Docks and Basins.	Capacity of Warehouses, etc.	Principal Imports.	Principal Exports.
Scotland—*continued.*					Feet.	Acres.			
Bo'ness.	Joint Stock.	North British Railway Co.	1871	£330,000	22	13	10,000 tons, 1 shed china clay, 4 hydraulic coal hoists, 15 cranes.	Timber, Esparto Goods, Grain, Ore, Phosphates, China Clay.	Coal, Iron, General Goods.
Burntisland (West Dock and East Dock).	Local Public Trust.	Burntisland Harbour Commissioners.	West, 1876 East, 1901	£660,000	28½	West, 5½ East, 11½	194,400 cubic ft.	Wood, Cottonseed, etc.	Coal.
Dundee.	Do.	Dundee Harbour Trust, 1815.	About 1447	£1,265,377	35 H.W.O.S.T. 20 L.W.O.S.T.	38	Harbr. w'house 10,000 cub. yds., relief w'houses 51,436 cub. yds., transit sheds 45,807 sq. yds.	Jute, Flax, Hemp, Timber, Iron, Coal, Soya Beans.	Linen, Sailcloth, Sacking, Paper, Yarns.
Glasgow.	See Clyde, *Table D*; and Port-Glasgow.								
Grangemouth.	Joint Stock.	Caledonian Railway Co.	1843		30 H.W.O.S.T.	Docks, 58 Basins, 45	Commodious sheds of single & double storey type.	Timber, Iron Ore, Oil, Pig Iron, and General.	Coal, Manufactured Iron and Steel.
Greenock.	Local Public Trust.	Greenock Harbour Trust.	1710	£1,500,933	20 to 32 H.W.O.S.T.	64	W'houses 25,000 tons, sheds 19,000 tons.	Sugar, Timber.	Coal, Iron, Sugar.
Leith.	Do.	Commissioners for the Harbour and Docks of Leith.	1806	£2,500,000 £800,000	14 L.W.S.T. 30 H.W.S.T.	68, Inner Harb'r 10	15,000 tons grain, private warehouses.	Grain, Flour, Timber, Sugar, Provisions, Fruit, Feeding-stuffs, Manures, etc.	Coal, Beer, Herrings, Sulphate of Ammonia, Iron Goods, Bricks, Oil, Paper, etc.
Methil.	Joint Stock.	North British Railway Co.	1885	£515,600	32	2 Docks, 4¾ & 6½, 3rd 15.	40,000 cubic ft.	Timber.	Coal.
Montrose.	Local Public Trust.	Montrose Harbour Trustees.	1843	£28,264	18½	3½	11,948 sq. ft.	Timber, Flax, Hemp, Coal, Lime.	Grain, Fish, Timber, Potatoes.
Port-Glasgow.	Do.	Port-Glasgow Harbour Trustees.	1668	£11,084	22	16½	None.	Timber, Iron Ore, Pig Iron, and Limestone.	Ships, General.
Ireland.									
Belfast.	Local Public Trust.	Belfast Harbour Commissioners.	1785	£1,553,707	32 H.W.O.S.T.	2118	Ample private warehouse accommodation.	Coal, Cotton, Flax, Breadstuffs, Timber, Iron and Steel, Oil in Bulk.	Linen, Hides, Whisky, Potatoes, Iron Ore.
Dublin.	Do.	Dublin Port and Docks Board.	1707	£1,936,094	33 H.W.O.S.T. 30 H.W.O.N.T.	205	Floor area 19 acres.	Timber, Grain, Coal.	Grain, Spirits, Porter, Cattle.
Galway.	Do.	Galway Harbour Commissioners.	1832	Old Dock £65,000 East Dock £41,571	17 to 18 S.T. 12 N.T.	9	None.	General.	Provisions.

H.W.O.S.T.—High Water Ordinary Spring Tides. H.W.O.N.T—High Water Ordinary Neap Tides. L.W.O.S.T.—Low Water Ordinary Spring Tides.

Competition in relation to Docks.—In almost all the provincial ports the dock corporations, whether municipal, trustee, or joint-stock, exercise a local monopoly. A great change has recently been brought about by the amalgamation of the railway companies in 1921. In many cases ports which were originally under the control of competing companies are now controlled by a railway group. Thus ports on the East Coast are under the control and management of the London and North-Eastern Railway Group. This fact must tend to reduce competition to smaller dimensions. [See DOCKS, App.]

Incidence of Dock Charges.—The policy of dock owners as regards the incidence of charges varies very widely. The charges in each port have arisen largely through local custom. The charges may be broadly divided into charges on the ship and charges on the goods. Charges on the ship may be divided into dues and rent. Dues are usually charged on net register tonnage, though they have been from time to time charged on the gross tonnage, as in 1856 at Sunderland. (For discussion on the policy of charging on the net or on the gross tonnage, see Royal Com. on Tonnage, *Report*, 1881; also *e.g. Shipping World*, vol. i. pp. 274, 323, 365, and 402). Under the Harbour Docks Act of 1847 preferential rates are prohibited.

Dock rent is charged, as in London, on gross tonnage. In some cases rent begins on entrance, in other cases it begins after a certain period has elapsed. Charges on *goods* may be divided into rates including landing, weighing, and delivery in the case of imported goods; collection, wharfage, and porterage in the case of exported goods; and warehouse rent. There are besides special charges on particular classes of goods. The rates on goods are fixed partly with regard to the difficulty, risk, and cost of handling them, and partly with regard to the value of the goods. At Bristol no rates are charged on exports. It is clear that dock rates so levied must act in a measure as a bounty on exports, and as a corresponding tax on imports. (On differential rates for freemen and foreigners, see Maitland, *History of London.*) There seems much need for simplification in dock charges. The classification adopted finally by the railway companies might form the basis of a classification for docks with advantage both to shippers and dock corporations.

Dock Finance.—The capital invested in docks in the United Kingdom may be estimated as not less than £200,000,000. This represents their probable cost.

It is doubtful whether the total return on the capital invested can average from 3 to 3½ per cent. In London in 1909 the interest on the £9,150,000 "A" Port Stock is at 3 per cent; the £13,210,000 "B" Port Stock is at 4 per cent. At Liverpool £4,677,000 of the loans are between 4 per cent and 4½ per cent, £11,710,000 between 3 per cent and 3⅞ per cent, and £64,000 between 2½ per cent and 2⅞ per cent.

Dock Ownership.—The ownership of the docks in the United Kingdom is distributed as follows:

State Ownership	1
Municipal Do.	3
Local Public Trust Ownership	37
Public Ownership	41
Joint-Stock Ownership	34
Private Do.	3
Private Ownership	37

[See DOCKS, Ownership of, in Appendix.]

Public Ownership.—The question of public ownership of docks has been frequently discussed. There are three main points involved—1st, management; 2nd, public convenience; 3rd, finance.

(1) *Management.*—It is argued that a number of men selected by their townsmen for known fitness for administration may administrate as efficiently as similar men selected for the same reason by a body of shareholders. No considerable support can be found for objecting to administration of docks by public trusts in the records of such bodies. The examples of Liverpool and Glasgow are very noteworthy as highly successful and efficient trusts. The same class of men is employed in the practical details of administration, both in companies and in corporations. (2) *Public Convenience.*—There is some reason for doubt whether any general case could be made out on this ground for or against public control. The slowness with which public bodies sometimes meet public demand has frequently been exemplified in the case of docks under both joint-stock and public management. (3) *Finance.*—While dock property may one day be extremely remunerative, it is still in a period of transition. The joint-stock dock shareholder has had, during these past few years, in some cases, to go without his dividend, while the public trust bondholder has, as a rule, got his interest. In this reference it should be remembered that municipalities have other resources at their command than dock charges. The broad ground of the advantage in the public interest of public ownership and control of all services which are essentially local monopolies, is the argument usually employed in favour of placing docks under public control. (See MONOPOLIES.)

[Harb. Docks and Piers Clauses Act 1847.—*Select Com. Ho. of Com. Harb. Accom.*, 1883.—*Dep. Trade Com. Report* iii., Entrepôt Trade, queries 10,072, 10,074, 10,098, 10,169, 10,283, 10,291, 10,673, 10,692, 10,848, and 11,334.—Macpherson's *Annals.*—Porter's *Progress of the Nation*, sec. iii., 1837.—Colquhoun, *Commerce and Police of the Thames.*—Locke, *Hist. of Navigation*, 1744.—

Vaughan, *Tracts on Docks and Commerce*, 1839.—Cruden, *Hist. of the Port of London*, 1843.—Eden, *Plan for the Improvement of the Port of London*, 1798.—*Reasons for Extending Wharves in London*, 1797.—Telford and Douglas, *An Account of the Improvements of the Port of London*, etc., 1801.—Forrow, *The Thames and its Docks*, 1877.—Capper, *The Port and Trade of London*, 1862.—Howell, *A Day's Business in the Port of London*, 1850.—Various histories of London and of the Thames and district, *e.g.* Boydell, Maitland, Pennant, Brayley, Knight, Walford, Loftie.—Burrows, *The Cinque Ports*, 1888.—Lyster, "Recent Dock Extensions at Liverpool," *Proc. Inst. Civ. Engrs.*, vol. c. pt. ii.—Mason, *A brief Hist. of the Dock Co. at Kingston-upon-Hull*, 1885.—*The Industrial Rivers of the United Kingdom*, 1888.—Deas, "The River Clyde," *Proc. Inst. of Naval Arch.*, vol. xxx. p. 20.—*B.A. Meeting Newcastle, Official Handbook of Industries*, 1889.—*Inst. of Mech. Engrs., Liverpool Meeting*, 1891, Official Handbook.—*Shipping World Annual.*—Lindsay, *Hist of Merchant Shipping and Ancient Commerce*, 1874.—"Dock Companies Shares," *Jour. Stat. Soc.*, xxxix. p. 495.—Turnbull, *Dock and Port Charges.*—Thubron, *Dock and Port Charges.*—"Floating Docks in London," *Industries*, vol. i. p. 337.—Harcourt, *Docks and Harbours.—First Annual Report of the Port of London Authority*, 31st March 1910.—Port of London Authority, *Visit of the Institute of Journalists*, 17th Sept. 1910.—*Tables of Rates and Charges.—Accounts of the Mersey Docks and Harbour Board.—The Port of Liverpool: Its Rise and Progress.—Port of Manchester Official Sailing List and Shipping Guide.*—Broodbank, Sir J. G., *History of the Port of London* (2 vols.), 1921.—Harper, R. W., *The Port of London Act*, 1908 (*London*, 1910).—Charles Booth, *Life and Labour of the People in London*, 1903.] E. L. H.

DOCK LABOUR. The information given by Charles Booth in *Life and Labour of the People in London*, vol. 3, Second Series (Industry), remains the best source for information on the conditions of men employed daily on the docks and wharves and in warehouses, now under the control of the Port of London Authority, and their earnings.

Those employed are mentioned in the First Report of that Authority for the year ended 31st March 1910 as follows:—

"All the undertakings transferred to the Authority were found to be working under different systems in regard to the employment, payment, and classification of staff; and the work of reconciling these differences in practice and of a general re-classification is making good progress. The annual charge in respect of superannuation and benevolent allowances at present amounts to £70,405. The question of establishing one pension scheme for the whole of the staff is under consideration.

"The staff of the Authority at the 31st March 1910 numbered 11,297, as follows:—

Salaried staff	1,156
Wages staff—	
Permanent men on the establishment	5,074
Not established, but regularly employed by the week	2,123
Extra men—	
Daily average	2,944
	11,297"

And the Report continues: "In accordance with the requirements of section 28 of the Act, the Authority has taken into consideration the question of the regulation of the engagement of casual labour."

In time it may be expected that the organisation of the labour required will be arranged on a better footing than previously.

Meanwhile Mr. Booth's remarks on the subject will be read with interest. "The earnings of the professional docker are shared by a considerable number of incomers from other trades who seek work at the docks, not because the docks are busy, but because their own trades are slack, and herein lies the peculiar difficulty of dock industry. If, instead of coming at all times, these men from other trades were introduced only when the docks were busiest, their numbers could even be increased with advantage, and, combined with a reduction in his own ranks, would probably lead to improvement in the position of the professional docker' "The varying demand for labour at the docks can be provided for in four different ways: (1) by maintaining at all times a sufficient force to cope with the largest amount of work offering; (2) by working overtime when needed; (3) by drawing upon outside labour for additional hands in busy times; (4) by postponing some of the work. Of these four it is upon the first alone that the employers now rely, and the only mitigation of its hardship is the extent to which the men may themselves find other work in slack times."

The wages received are difficult to estimate. The work includes great variety of labour, stowing cargo requiring skill and care; discharging cargo, though not needing exactly the exercise of the same qualities, must be efficiently performed. The classes employed extend from the "Amalgamated Stevedores Society" down to general and casual labourers. The average value of the work of the two last-mentioned classes may be put at from 4s. 6d. to 4s. 3d. for those regularly employed. It is impossible to estimate the earnings of the casual labourer. A careful regulation of the work is essential to avoid the evils so long connected with dock labour. Into the methods proposed to secure this we cannot go here. Mr. Booth truly says, "of all the causes of poverty and misery, irregular work, coupled, as it always must be, with irregular lives, is by far the greatest. A change in this would effect more than almost anything else could do for the welfare of the people." To the owners of dock property also a proper

arrangement for the supply of efficient and dependable labour is most important. It is regularity of employment which it is most desirable to secure. The more regularly employed men obtain also the higher rates of pay.

The statement given above refers to the labour employed in the London docks. The circumstances of the other docks in the country differ considerably from these, but what has been stated will show the importance of this industry to the commerce of the United Kingdom.

[Booth, *Life and Labour of the People in London*, vol. iii. second series.]

DOCK WARRANT. A document by which a dock company or other dock owner certifies that the holder is entitled to receive certain goods specified therein, deposited with such dock company or other dock owner (see *Dock warrants* in art. Dock, p. 615). A dock warrant is generally transferable by indorsement; a holder, though in good faith, and though he had given value for it, was formerly in a less favourable position than the holder of a bill of lading; but since the Factors Act of 1877 a transfer of a warrant by the buyer or owner of the goods to which it refers, to a person who takes the document in good faith, has "the same effect for defeating any vendor's lien or right of stoppage *in transitu*, as the transfer of a bill of lading has for defeating the right of stoppage *in transitu*" (Factors Act, 1889, §10). (See Commercial Instrument.) E. S.

DOCQUET. (1) Declaration by a notary authenticating an instrument of sasine (Scotland, before 1845); (2) Declaration by a notary, by a justice of the peace, or by the parish minister in his own parish, authenticating the signature of a person unable to write (Scotland); (3) Authentication of a mercantile account by signature, initials, or jotting.

[Scotland: Dickson on *Evidence*, §§ 797-800.]

A. D.

DOCTRINAIRE is a term of reproach designating one who applies theory without due regard to facts. The doctrinaire forgets that in social science a consilience between deduction and verification is generally requisite (see Mill, *Logic*, bk. vi. ch. viii. ix.) He is like the Aristotelian doctors in the age of Galileo, who continued to believe that bodies fall faster the heavier they are in spite of experiments proving the contrary. However, such open defiance of facts is rare even in political economy. An instance is the resolution of the British parliament that bank notes had not depreciated with respect to gold in 1811, when the guinea was commonly exchanged for 24s. shillings in paper money and silver. The more usual type of doctrinaire is one who has, so to speak, a tolerably correct theory of gravitation, but makes no allowance for the resistance of the air. The omission of this concrete fact may or may not be serious according to circumstances. The abstraction may be legitimate in the case of a stone dropped from a height, but fatal in the case of a feather. An economic principle like *laissez-faire* may be valid in general, but in some important case be counteracted by peculiar circumstances. Such peculiarities distinguish the labour market from markets in general (see Marshall, *Principles of Economics*, bk. vii. chaps. iv. v. vi.) Those who opposed the Factory Acts on the principle of *laissez-faire* were doctrinaires—so time has proved. But prior to the additional experience of the last half century it was not easy to see who was the doctrinaire and who the empiric. A hesitation between the rule and the exception may often be reasonable. In general no short and handy rule can be given for steering between the Scylla of empiricism and the Charybdis which swallows up the doctrinaire. Some cautions against the more dangerous extreme, some education of the instinct or tact which is required in order to hold the right mean, may be obtained from the example of those who have made shipwreck, and from the precepts of the wise.

A signal example is afforded by the so-called currency principle in banking (see Bank Note; Currency Doctrine), which was held by Lord Overstone, and largely influenced the Bank Act of 1844. Those who relied on this principle fixed too exclusive attention on the "quantity-theory" of money, neglecting incidents peculiar to a convertible currency, and the fact that bank notes form but a small part of the English circulation. The theory is contrary to the fact that after crises, while prices have greatly fallen, the notes in the hands of the public have greatly increased (see Palgrave, *Journal of the Bankers' Institute*, January 1890). Other examples are afforded by some of Ricardo's followers. Ricardo, as Professor Marshall says, is "more responsible than any one else for the habit of endeavouring to express great economic doctrines in short sentences;" for instance, "The natural price of labour is that price which is necessary to enable the labourers one with another to subsist and to perpetuate their race" (*Pol. Econ.*, ch. v.) "A tax on wages is in fact a tax on profits" (*ibid.* ch. xvi.) "Nothing is more common than to see hats or malt rise when taxed . . . so with labour, when wages are taxed, its price rises" (*ibid.*) "The natural tendency of profits is to fall" (ch. vi.) Those who have interpreted these *dicta* literally, without regard to qualifying passages, both "the hangers-on of the science who have used it simply as an engine for keeping the working classes in their places," and also some socialists—may be considered doctrinaires (see Marshall, *Principles of Economics*, pp. 63, 532, 672). The appellation was probably deserved by M'Culloch when he applied to the concrete case of Ireland his

abstract theory that a landlord does not injure, but rather benefits his countrymen by becoming an ABSENTEE (*q.v.*) However, in this and other instances, it may be proper to attribute the mistake rather to the reasoning process than to a neglect of experience. The holder of a false doctrine is not necessarily a doctrinaire. Still it is true that the bad consequences of wrong theories have been aggravated by neglect of ordinary experience and want of common sense. Examples of wrong theories and their consequences will be found in the articles on BALANCE OF TRADE; MERCANTILE SYSTEM; PHYSIOCRATS; WAGES FUND, and many other headings—beginning with L. P. ABEILLE (*q.v.*) the doctrinaire who taught that a rise in the price of corn was beneficial to the community, and that high corn prices make high wages.

Such instances fully justify Burke's condemnation of the mathematical method in human affairs (*Reflections on the French Revolution, Letter to a Noble Lord, et passim*). Burke's indignation is directed chiefly against the political doctrinaires of his own time. But it is equally applicable to the "economists and sophisters" of a later age. It should be noticed that the same Burke does not on occasion shrink from applying economic theory with some severity (see *Thoughts on Scarcity*, remarks on the "Labouring Poor"). An instructive protest against the abuse of abstract reasoning is contained in Richard Jones's *Rent* and other writings. Whewell, in his preface to the works of R. Jones, aptly compares the doctrinaire to one who should assume that the surface of the earth was entirely determined by gravitation; making abstraction of the forces of cohesion by which the mountains are "in fluctuation fixed." To complete the metaphor, it should be observed that the abstract hypothesis works very well for the greater part of the surface of the terraqueous globe. The difficulty is to discern in each case what is the character of the subject matter, how far the hypothesis of perfect fluidity is admissible. The importance of facts cannot be stated more emphatically than by Mill in his *Unsettled Questions*. The economist must not rest satisfied until he has examined all the facts which appear contrary to his theory, and either made allowance for exceptions, or ascertained that the appearance was illusory. The theorist who will not take this trouble must be content to hold his opinions with great modesty. Mill repeats this lesson in his account of Auguste Comte; whose warnings against the danger of isolating political economy from social science deserve much attention. Another source of instruction is afforded in the German historical school. Those especially who have shown that they appreciate the value of abstract reasoning (see Wagner, *Quarterly Journal of Economics*, 1886) teach with authority that theory without experience is barren. The method of Prof. COHN is very instructive. In his classical work on English railways he overthrows by arguments drawn from experience the doctrinaires who preach an equal mileage rate and fares proportionate to cost. Over the ruins of this demolished doctrine he builds, upon a broader basis of fact, a new theory which differs from the old, not in being less simple—for it is capable of being expressed in mathematical form (see Hadley, *Railway Transportation*, Appendix; and art. ON DUPUIT)—but in better representing the real circumstances. Among English economists who have stigmatised the intellectual vice which is the subject of this article should be noticed Cliffe-Leslie (*Essays*); Prof. Ingram (Presidential Address, Section F, British Association, 1878); Dr. Cunningham (*Growth of English Commerce, passim*). Even unscientific writers like CARLYLE (*q.v.*) may impart common sense. Literary humour is a potent antidote against the crotchets of doctrinaires. Take as examples: Voltaire's "L'homme aux quarante écus;" Scott's Malachi Malagrowther; some of Thomas L. Peacock's stories, especially *Crotchet Castle;* part of Ruskin's *Unto this Last* (ABSTRACT POLITICAL ECONOMY; FACTS).

F. Y. E.

DOCTRINE OF POPULATION (MALTHUS). See MALTHUS, Rev. T. R.; POPULATION.

DOGMA. This term, which properly should signify nothing more than opinion, has come to signify an opinion adopted without proof and maintained with passion. In political economy the term dogmatic, like the terms abstract, unhistorical, etc., is often applied to the old, or, as they are more indulgently described, the classical economists. These economists are sometimes supposed to have based their system upon certain arbitrary assumptions or dogmas such as the universal selfishness of human nature, the universal prevalence of competition, and the universal tendency of population to outrun the means of subsistence. They are sometimes contrasted with the later economists, who are said to have employed induction rather than deduction, and to have consulted history rather than to have employed arguments derived from the working of their own minds. The difference in so far as it exists is only one of degree. No economist—indeed no scientific inquirer—can avoid holding opinions which those who differ from him might stigmatise as dogmas. The processes of induction and historical inquiry would be both endless and fruitless to one who undertook them with a perfectly blank mind. Induction is possible only if we assume the uniformity of nature. History has no lessons for us if we do not assume a certain continuity in human character. In framing an induction or in writing a history there is always implied a process of selection among numberless facts. Such a selection can proceed only upon some principle adopted by

the inquirer; a principle which he does not find, but bring. "Let any one watch the manner in which he himself unravels a complicated mass of evidence; let him observe how, for instance, he elicits the true history of any occurrence from the involved statements of one or of many witnesses; he will find that he does not take all the items of evidence into his mind at once and attempt to weave them together; he extemporises, from a few of the particulars, a first rude theory of the mode in which the facts took place, and then looks at the other statements one by one to try whether they can be reconciled with that provisional theory or what alterations or additions it requires to make it square with them" (Mill, *Logic*, bk. iii. ch. xiv.) Hardly any progress therefore can be made in political economy without assuming certain general propositions. On the other hand, such propositions must be regarded as merely provisional, and must always be liable to revision as research goes on. The same remark applies to the conclusions reached from such premisses which in turn afford a point of departure for new theorising.

[See articles CLASSICAL ECONOMISTS; DOCTRINAIRE, and the authorities therein cited.]

F. C. M.

DOITKIN. A small base coin—probably of Flemish origin—prohibited by Statute 3 Henry V. ch. i. Hence the expression "not worth a doit." H. Ha.

DOLE-FISH. The proportion of fish received as their allowance or share, according to custom, by the fishermen employed in the North Sea fisheries.

[Statute 35 Henry VIII. ch. vii.] H. Ha.

DOLES. A dole is defined by Dr. Johnson as "provisions or money distributed in charity," but the ordinary use of the term in modern times implies somewhat more than this. A dole is now generally understood to be opposed to regular or permanent help, and to be comparatively small in amount. Doles figure largely in the charitable bequests of old time. Thus at Oxford, on St. Thomas's Day, there were given away more than seventy such, ranging in value from 13s. 6d. up to £5, and hardly any town or parish in England is without them. Every kind of condition may be attached. They are confined to freemen, to residents in certain parishes, to regular attendants at church, to widows, to spinsters, to servants, to young men, to old men, to cripples, to the blind. The modern spirit, embodied in schemes issued by the charity commissioners, has abolished large numbers of them, but they still survive in places which resist reform. The objections to the dole-system are numerous and weighty. "The practice of distributing doles," said Sir George Jessel in the famous Campden case, "should be more honoured in the breach than in the observance. There is no doubt that it tends to demoralise the poor and benefit no one . . . the extension of doles is simply the extension of mischief." What are the grounds for so sweeping a condemnation? The first principle in administering charity is that it should be adequate to its purpose of relieving distress or re-establishing independence. Neither of these objects is secured by doles. They are not sufficient in amount to meet a crisis, nor continuous enough to provide for old age; in many cases it is expressly forbidden that the same person shall be a recipient on two consecutive occasions. Again, they are often so numerous, and so unimportant in amount, as to be given without any of that preliminary inquiry which is essential to wise almsgiving, and hence they fall largely into the hands of persons who make anything but a good use of them. The conditions attached to the receipt of doles are often of an absurd kind. They hardly ever further their object, they lead to gross hypocrisy. It is idle to suppose that any religious body receives moral support from the membership of those who are attracted by them; in the great majority of cases it is brought into disrepute by the inconsistency of the profession and practice. Hence, far from being strengthened by such gifts, religion itself comes under the suspicion of aiding and abetting unreal conformity, and its moral influence is weakened and its progress stayed. Add to these objections the canvassing for such gifts, the loss of self-respect involved, the temptations to dishonesty in appearance and in phrase, the melancholy effect on children of witnessing such conduct on the part of their parents, the inducement offered to give up the attempt to gain an honest livelihood and seek it by begging and fawning, the attractions which such periodical distributions have for the idle and self-indulgent from every quarter to settle in the favoured parish or town, and it is not difficult to see that charitable bequests in the form of doles tend almost inevitably to increase the very evils which their founders hoped to abate. A single example will illustrate this. The charities of the city of Bristol were, in 1892, estimated thus:—endowed £50,000, subscription and Colston £41,000, private £50,000, in addition to a poor-law expenditure of £55,500—in all £196,500 annually spent on a population of 221,665 (census of 1891). And what are the results of the system pursued in many cases? It is said to demoralise and pauperise. "The poor, qualified by residence in parishes in which endowments exist to receive their benefits, look upon them as a right, apply for them regularly, irrespective of need, and accept them with thanklessness. Jealousies and discontents grow round their distribution. The thought that they will fall in induces unthriftiness; debts are run up to be paid off by them; and if not this, being something beyond and

outside the ordinary sources of income, they are deemed fittingly applicable for some unwonted and needless expenditure. Many waste their hearts in expectancy, and their time—years may be,—better spent in efforts to earn their living, in the continual pursuit of gifts. The adroit professional charity-hunters get the lion's share of them. The industrious old people find themselves too late. Much of the money, and even gifts in kind, quickly sold or pawned, are spent in drink" (*The Condition of the Bristol Poor*). So far doles have been treated as a form of bequest only. The same characteristics and the same results are seen in part in the case of indiscriminate charity by individuals, and of out-door relief given by boards of guardians.

[*Charity Commission Act*, ed. R. E. Mitcheson, 1887.—*Charity Commission Reports.*—*Charities Register and Digest*, Introd. pp. cxlv. *et seq.*—*Poor Law Commission, Report and Evidence* (1837).—*Report of the Committee to Inquire into the Condition of the Bristol Poor* (1885).—*Confessions of an old Almsgiver* (1871).] L. R. P.

DOLLAR

History of, p. 626; of Account, p. 627; Hard (Stock Exchange use of word), p. 627; Hard Spanish, p. 627; United States—gold and silver dollar, p. 627; Trade (United States), p. 627; Maria Theresa or Levantiner Thaler, p. 628; Mexican or Peso, p. 628; South and Central American Republics and British Honduras, p. 628.

Dollar, History of. The name dates from the year 1517, when the Counts of Schlick directed a large coinage of the already familiar silver "gulden groschen" in Joachimsthal (*i.e.* St. James's *Dale*) in Bohemia, whence the coins came to be known as *Joachimsthaler*, or simply *thaler*, the coin of the *Dale*. In 1566, at the Convention of Augsburg, the thaler was adopted as an imperial coin, under the name of "reichs-thaler," or "rix-dollar." At this date the millesimal fineness of the coin was reduced from 937·5 to 888, though the weight remained the eighth of a Cologne mark, or about 451 grains troy. The standard was again settled at Leipzig in 1690, and subsequently in 1763; but these changes, and the history of the rix-dollar, are unimportant for the purposes of this article, seeing that with the close of the 17th century the name (modified to "dollar") was usurped—at least among English-speaking peoples—by a *Spanish* coin, the history of which it is now necessary to trace.

The unit of the (silver) monetary system of Spain had been the "real" or "royal" since at least the days of Pedro the Cruel (before 1369) and was retained by Ferdinand and Isabella in their Mint Edict of 13th June 1497. It was the multiple of this unit, the "piece of eight" reals, weighing by law 423·9 grains, of 931 millesimal fineness, and therefore containing some 394½ grains of fine silver, which was poured forth from the Spanish-American mints after the conquest of Mexico and Peru, early in the 16th century, in such profusion as to become a universal coin, reaching even China—by way of Goa and the Philippines—before the close of the 16th century. Thus, as the rix-dollar and the "piece of eight" were practically of identical fine weight and value—4s. 6d. sterling being the accepted standard,—it came about that, the geographical meaning of "dollar" (or thaler) having been forgotten, the "piece of eight" obtained the name of the "Spanish dollar." And, as the rix-dollar began to lose, even in Germany, its earlier importance—except as money of account—the name "dollar," from the beginning of the 18th century onwards, was entirely usurped by the Spanish coin, which after 1686 ceased in the Peninsula to be a "piece of eight," and became a piece of *ten* reals of "new plate." In 1728 the Bourbon kings of Spain, in issuing the new device of the "globe dollar," took the opportunity to reduce the gross weight to 417·6 grains, and the millesimal fineness to 916·6, and in 1772 the fineness was further reduced to 902·7 for the later device of the "Carolus," or "pillar" dollar. The latter standard was preserved in Spain up to 1848, and survives to the present day in the Mexican dollar, the lineal descendant since 1821 of the Spanish dollar.

It should be added that under Spanish rule the dollar was uniformly below standard. Prior to 1728 its fine content was found by the English mint to be only 385 grains, as against 394·6 by law; between 1728 and 1772 only 377 grains, as against 382·8 by law; and between 1772 and 1810 only 371 grains, as against 377 by law. The Mexican dollar, dating from 1821, has steadily improved, until in the present day, as shown by investigations at the London Mint in 1891, the dollar is practically up to its legal standard.

Though Spanish America was lost to Spain by the revolutionary wars of 1810-21, and though with 1810 the Spanish dollar practically ceased to be coined, yet it still continues to circulate as the standard coin, to the exclusion of the Mexican dollar, the dominant coin of the far East, in certain Malay and Siamese-Malay States—Rhaman, Legê, Patani, and, to a less degree, Kelantan. But, of far greater importance than the modern circulation of the Spanish dollar itself is the line of its descendants. Apart from (i.) the dollar of the Philippines; (ii.) the Mexican dollar and (iii.) the debased piastre of Turkey; the Spanish dollar has originated the silver dollar of the United States, which, in 1785, was avowedly modelled on the average of the Spanish coins in circulation, and so indirectly of the gold U.S. dollar worth 49·316d. sterling. Another gold descendant is the two-dollar piece of Newfoundland. The Hong-kong Mint dollar of 1866-68, the

Japanese "yen," of 1871 onwards, and the recent Canton dollar, are immediately derived from the Mexican, not the Spanish dollar. Most of the South American dollars are now "dollars" only in name, being in reality five-franc pieces weighing only 25 (instead of slightly over 27) grammes. In Spain, which has adopted the monetary system of the Latin Union, the new five-peseta, or five-franc, piece is similarly known as a dollar.

[Synonyms. Pieza de á ocho, Peso duro, Piece (or Royal) of Eight, Piastre, Colonato, Cob (from *coba*, slang Spanish for Real) Gourde, Escudo de Plata, etc.]

[Becher, *Das Oesterreichische Münzwesen* (Wien, 1838).—Heiss, *Monedas Hispano-Christianas* (Madrid, 1865).—Linderman, *Money and Legal Tender in the United States* (1877).—Zedler, *Universal-Lexicon* (1745), *s.v.* "Thaler."—*Mint Report* for 1891.] R. C.

Dollar of Account. On the stock exchange of London it has been for many years usual to reckon the United States dollar as worth always 4s.; although the actual exchange value of the American dollar is usually near 4s. 2d. It is obviously useful to have, for purposes of quotation, a dollar which is worth exactly one-fifth of a pound sterling. American railroad shares are always quoted in these dollars, and the par value of 100 dollars stock in New York would be, as a rule, nearly 103 dollars in London; and the dollars in which dividends on those shares are paid give the shareholder a rather better percentage than appears when the rate of dividend is reckoned at so much per 100 of the nominal 4s. dollars in which London quotations are given. A. E.

Dollar, Hard (*Stock Exchange use of word*). This was the name given on the London stock exchange to certain bonds issued by the state of Buenos Ayres. A hard dollar was originally intended to mark the difference between two currencies of the Argentine Republic, the soft dollar having fallen to an indefinite depreciation in consequence of the over-issue of paper money by that state. The hard dollar, then, had a special value; but in the year 1889 it was found expedient to convert the hard dollar bonds into sterling bonds bearing 3½ per cent, so discreditable was it found by the Argentine government that its "hard" dollars should be depreciating almost as much as the baser currency from which it was formerly distinguished. A. E.

Dollar, Hard (*Spanish*). The old Spanish dollar was known as the *peso duro*, or hard dollar. It was struck and issued from 1707 to 1868, when the *peseta* (franc) system of currency was adopted in Spain.

The following is a list of the various weights and finenesses at which this coin was issued at different times; from which it will be seen that, for a coin circulating for so long a period as 161 years, the variations were not great:

Year.	Weight.		Fineness in 1000 parts.	Value in silver 925 fine at 5s. 6d. per ounce.	Value in standard silver francs (900 fine).
	Grains.	Grammes.			
				pence.	francs.
1707-28	423·89	27·468	930·500	58·638	5·680
1728-72	417·74	27·064	909·722	56·491	5·471
1772	417·74	27·064	902·778	56·064	5·429
1848	405·75	26·291	900·000	54·281	5·258
1850	402·87	26·105	900·000	53·897	5·221
1854-68	400·64	25·960	900·000	53·598	5·192

The subdivisions of the *peso duro* were all, until the year 1864, of proportionate weight and fineness to the *peso*. In that year the *escudo*, or *half-peso*, only was struck in metal of the same fineness as the *peso*, the remaining divisional pieces becoming merely tokens, with a millesimal fineness of 810. These coins, however, were still coined proportionate in weight to the hard dollar.

The hard dollar, which was first struck in 1772, is of exactly the same weight and fineness as the Mexican dollar, and was, in fact, the coin of which originally the Mexican dollar was the copy. F. E. A.

Dollar (United States). The standard of value in the United States, and both a gold and a silver coin.

Gold Dollar.—Standard gold coin first authorised by Act of Congress in 1849, and first issued in that year. Weight 25·8 grains, fineness 900. Value: English standard (916·6 fine at £3 : 17 : 10½ per oz.) 49·32d.; French standard (900 fine) 5·18 francs.

Silver Dollar.—Standard silver coin first struck in 1793. Weight 416 grains, fineness 892·4; altered in 1837 to weight 412·5 grains, fineness 900. Value: English standard (925 fine at 5s. 6d. per oz.) 55·184d.; French standard (900 fine) 5·346 francs. The coinage of silver dollars was discontinued in 1873, when the gold dollar was established the sole standard of value. In 1878, however, an act was passed reinstating the silver dollar as a standard coin, and their coinage was recommenced. F. E. A.

Dollar, Trade (United States). A silver coin struck for use in the trade between the United States and China during the five years 1874 to 1878 inclusive. Weight 420 grains, fineness 900. Value: English standard (925 fine at 5s. 6d. per oz.) 56·19d.; French standard (900 fine) 5·443 francs. These coins were originally legal tender in the United States to the amount of $5, but were demonetised in 1876, and were then only struck for depositors of bullion on the condition that they were exported. In 1878, however, their coinage was discontinued, as considerable quantities had found their way back to the United States, where they were put into circulation at a profit. The total amount coined was

$35,959,360, equal to nearly £8,000,000 sterling. Those circulating in the United States (about $7,000,000, or roughly £1,400,000) were redeemed by the government at their nominal value. F. E. A.

DOLLAR, MARIA THERESA, or LEVANTINER THALER. Austrian silver (trade) coin, first struck in 1765. Since 1780, however, these coins have always been issued bearing the date of that year and the effigy of the Empress Maria Theresa. They are issued for use in the Levant and Asiatic trade. Weight 433·15 grains, fineness 833·3. Value: English standard (925 fine at 5s. 6d. per oz.) 53·6d.; French standard (900 fine) 5·2 francs. This coin has no subsidiary divisional pieces. It will continue to be coined under the new Austrian currency arrangements. F. E. A.

DOLLAR, MEXICAN, or PESO. Silver coin; weight 417·74 grains, fineness 902·7. Value: English standard (925 fine at 5s. 6d. per oz.) 56·064d.; French standard (900 fine) 5·429 francs. The coins subsidiary to the Mexican dollar are ½ Peso (50 cents), ¼ Peso (25 cents), $\frac{1}{10}$ Peso (10 cents), $\frac{1}{20}$ Peso (5 cents), all of which are 902·7 fine, and proportionate in weight to the dollar. This coin circulates in China, Hong-Kong, the Straits Settlements, and the East generally, being received by weight. It is also bought and sold as bullion in all parts of the world. "Chopped dollars," which are Mexican dollars that have been chopped or stamped with a mark by the Chinese, are a circulating medium in Hong-Kong, Foochow, Canton, and Amoy, where they are usually received at the rate of 717 Canton taels per 1000 dollars. F. E. A.

DOLLAR (South and Central American Republics). In the Argentine Republic, Chili, Colombia, Ecuador, Guatemala, Honduras, Peru, Uruguay, and Venezuela, the standard of value is the silver dollar, a coin of 385·8 grains, 25 grammes, of silver 900 fine. Value: English standard (925 fine at 5s. 6d. per oz.) 51·613d.; French standard (900 fine) 5 francs.

The Guatemalan dollar is the standard of value in the colony of British Honduras.

F. E. A.

DOLLAR, SPANISH. See DOLLAR, HARD.

DOLUS. Expression of Roman law denoting wrongful intention in the widest sense. Fraud presupposes "dolus," but there may be "dolus" without fraud; for instance an incendiary, or a person committing an assault is actuated by "dolus." E. S.

DOMAINE. In mediæval France, as in mediæval England, the king was expected to "live of his own," and to apply to his subjects for aid to meet any extraordinary expenses. Hence *domaine* comes to mean, not only the lands which the king possesses like any other landowner, but the whole of the ordinary revenue of the crown, as distinguished from the extraordinary revenue or taxes. The *domaine matériel*, or crown lands, was declared inalienable by an edict of 1318, which was frequently renewed, and grants from it were frequently resumed by the crown. In spite of these measures, however, it continued steadily to diminish until the 17th century. The *domaine immatériel* consisted mainly of the almost innumerable rights which belonged to the crown. The most important of these were the *droit d'amortissement*, the payment by a corporation for leave to acquire real property, the *droit d'aubaine* (see AUBAINE, DROIT D'), by which the crown inherited the property of foreigners dying in France, the *droit de bâtardise*, by which the property of bastards fell to the king, the *droit de franc-fief*, and the *droit de régale*. The domain revenue also included the proceeds of the sale of offices, and the PAULETTE (*q.v.*) paid by members of the parliament and other courts. In the 18th century the domaine was calculated to bring in about forty-one million francs (£1,640,000). R. L.

DOMBASLES, ALEXANDRE MATHIEU DE (1777-1843). With the support of M. de VILLENEUVE-BARGEMONT (*q.v.*) the author of the *Economie Politique Chrétienne*, at that time prefect of the department of the Moselle, he founded in 1822 the model farm of Roville, the first agricultural school established in France. His teaching was mainly experimental, and to the end he maintained that "in reality the agricultural improvements, which result from chemistry or vegetable physiology, amount hitherto to very little indeed. . . . The theory of agriculture consists of rules, which are to be deduced from the comparative observation of facts in a great number of various cases. . . . An agricultural school ought to be an agricultural *clinique*" (*Œuvres Diverses*, Paris, 1843, pp. 214-225). As an experimental teacher, Mathieu de Dombasles rendered immense services to French agriculture by the publication of his results in the *Annales de Roville* (9 volumes, 1825, and following years); he was one of the promoters of the beetroot-sugar industry, popularised the methods of breeding of Bakewell, and of farming of Sir John Sinclair, and in a pamphlet, *De l'Impôt sur les Eaux de Vie* (1824), tried to induce the French government to protect the distillation of spirits from potatoes. He also thoroughly explained the advantages and disadvantages both of small and of large farms in his essay on *L'Etendue des Propriétés Rurales dans ses rapports avec la prospérité de l'Agriculture* (1825).

In connection with agriculture, Mathieu de Dombasles often approaches economic questions (see the first part of his *Œuvres Diverses* entitled *Economie Politique*). He was a staunch protectionist and an opponent of French colonial enterprise in Algeria. He also objected to the

teaching of agriculture in country primary schools. E. CA.

DOMESDAY BOOK is the name which, at least since the 12th century, has been borne by the record of the great survey of England made by order of William the Conqueror. Apparently the decree for the survey was issued at a moot held at Gloucester at the midwinter of 1085-86, and the work was completed in the course of the following year. Royal commissioners (*legati*) were sent into each shire with a list of interrogatories, to which they were to obtain sworn answers from local juries. Their procedure seems to have been this—they held a great shire moot, at which every hundred or wapentake of the shire was represented by a jury, while every vill was represented by a deputation of villagers. From each hundred-jury they obtained a verdict about all the land in the hundred, the villagers being at hand to correct or supplement verdicts, while "the whole shire" was also present, and from time to time appeal could be made to its testimony. The statement thus supplied was "reduced into writing and duly transmitted to the king. It was afterwards methodised and abstracted, and fairly transcribed in the great volume of Domesday and deposited in the royal treasury at Winchester, amongst the other muniments of the realm. It still exists, fresh and perfect as when the scribe put pen to parchment, the oldest cadastre, or survey of a kingdom, now existing in the world" (Palgrave, *History of Normandy and England*, vol. iii. p. 575). Our best information about the form of the original verdicts is contained, not in Domesday Book itself, but in a document known as the "Inquisitio Comitatus Cantabrigiensis." This seems to be a copy made in the 12th century of the verdicts delivered by the juries which represented some of the hundreds of Cambridgeshire. The verdicts having been obtained, they were sent to the king's treasury, and a digest was made of them by the royal officers. This digest is Domesday Book. If we may draw a general inference from Cambridgeshire, the materials supplied by the commissioners were subjected to a process of rearrangement. A scheme that was wholly geographical gave way to one which was partly geographical, partly proprietary. Domesday Book deals with each shire separately, but within the shire it collects, under the name of each "tenant in chief," all the estates that he holds, no matter in what hundred they may be. For example, the Cambridgeshire verdicts showed that Count Alan had lands in many hundreds. In the original verdicts the entries relating to his estates were therefore scattered about; in Domesday Book they are all collected together. Domesday Book consists of two volumes, sometimes called "Great Domesday" and "Little Domesday." The latter deals with Essex, Norfolk, and Suffolk; the former with so much of the rest of England as was surveyed. A document in the keeping of the cathedral chapter of Exeter, and known as "the Exon Domesday," contains an account of a large part of the south-western shires, which is very closely connected with that given by what, for distinction's sake, is sometimes called "the Exchequer Domesday." Seemingly this Exon Domesday is independent of the Exchequer Record, and goes back by a different route to the original verdicts. The same may perhaps be said of the "Inquisitio Eliensis," an account of the estates held by the church of Ely. This Ely inquest must not be confused with the Cambridgeshire inquest.

Domesday Book was printed and published in 1783 in two folio volumes. A third volume containing indexes was published in 1811, and this was followed in 1816 by a fourth volume containing the Exon Domesday, the Ely Inquest, and some other matters. Of late years useful facsimiles have been published by the Ordnance Survey Office of various parts of the great Exchequer Record, and can be obtained at moderate prices. The important Cambridgeshire Inquisition was first published by N. E. Hamilton in 1876.

A large literature has gradually been collecting round Domesday Book. Among the older books Robert Kelham's *Domesday Book Illustrated* (1788) and the essays of Philip Carteret Webb deserve to be mentioned. Sir Henry Ellis, in his *General Introduction to Domesday Book* (1833), supplied valuable indexes, and summed up the older learning. In the fifth volume of E. A. Freeman's *Norman Conquest* good use has been made of all that bears on political history, on the history of great men, great churches, great events. James F. Morgan's *England under the Norman Occupation* (1858) is a good introduction to the study of Domesday, and the like may be said of W. de Gray Birch's *Domesday Book* (1887). A new epoch in the scientific exploration of the record is marked by the various works of R. W. Eyton dealing with Dorset, Somerset, Lincoln, and Stafford, especially by the key to Domesday Book. Two volumes of essays by various writers, called *Domesday Studies* (1888-91), contain two valuable papers by J. H. Round, besides other matters. In some county histories Domesday has been well used, but here it is possible to name only the books of general importance. F. Seebohm's *English Village Community* has done much to awaken a new and an economic interest in our oldest statistics.

Much remains to be done. The student who approaches Domesday from the economic side will at once see that he has before him a vast mass of detailed statistics which ought to tell him much about agriculture, prices, rents, and the like. At the same time he will feel that

he is debarred from making use of these precious materials by the difficulty of discovering the meaning of the crabbed formulas which are repeated on page after page. The difficulty is a very real one. Domesday Book stands alone. It is so far removed in time from the documents which most nearly resemble it, the extents of manors which are found in monastic cartularies, that we have to explain it out of itself or not at all, for we shall look in vain for help elsewhere. Then again the terms that it employs as technical terms are, we may say, derived from two different languages which have only of late come into contact with each other. About half of them have been introduced by the Norman conquerors, while the other half are words which were in use in England under Edward the Confessor. Hence many puzzles; for example, what word did English juries say when French clerks wrote down *villanus?* Then again, the more our record is studied, the more plainly do we see that one main purpose governs both its form and its matter. King William is not collecting miscellaneous information in the spirit of a scientific inquirer. He is in quest of geld. Domesday Book is a geld book, a tax book. Geldability, actual or potential, this is its main theme. If then we are to understand its statistics, the first thing necessary is a theory of geld, of the manner in which the great tax has been and is assessed and collected. Towards the construction of such a theory not a little has been done by modern writers, especially by Eyton and Round, but until the work has been completed, speculations about rents and values seem doomed to failure. Everywhere, for example, the question meets us whether we are reading of real areal units of land or of units which are the results of a rude system of taxation, and a great deal of labour must yet be spent on the book before this question will have been adequately answered. F. W. M.

DOMESTIC SYSTEM OF INDUSTRY. This system is opposed to that of carrying on manufacturing industry in factories (*see* FACTORY SYSTEM). It was very general in England before the changes which were effected at the close of the 18th and the opening of the 19th century (*see* INDUSTRIAL REVOLUTION). Until the introduction of any but the simplest machinery, manufacturing industry had been closely associated with agriculture, and had been carried on, with few exceptions, in country towns and villages, in the houses of craftsmen or handicraftsmen, who worked with their own hands, aided by simple tools and appliances, and were hence called manufacturers (Latin, *manus*, a hand, and *facere*, to make). They were assisted by apprentices (*see* APPRENTICESHIP) whose number and time of service were fixed by law, and by a few JOURNEYMEN (*q.v.*), or hired labourers, whose wages were, in theory at least, settled by the magistrates. These apprentices and journeymen lived in the same house with the master-craftsman, and ate at his table. Thus in the woollen trade, which was the staple industry of the country, the spinning, weaving, and dyeing were carried on in the houses of craftsmen, few of whom possessed more than three or four looms, or had working under their direction more than eight or ten people—men, women, and children. There were apparently even now, and there had been for some time previously, cases of production conducted under the modern system, by which one individual supplies and controls the capital which is needed, but the actual processes of industry were pursued, with apparently few exceptions, in the houses of the craftsmen. This domestic system had its unfavourable side, but it seems to have often led to a feeling of warm personal attachment between the master and his men. With the introduction of machinery, however, and in a more marked and general degree with the employment of steam as the motive power of that machinery, the domestic system of industry gave place to the factory system; and, although it is still found in some employments, it is now the exception rather than, as it once was, the rule. The fact that steam can only be generated in a fixed spot, and that the motive power thereby furnished can only be distributed over a small area has, no doubt, tended to favour the concentration of industry in large factories; and it has been said that the discovery and substitution of some fresh motive power, such as electricity, or of some fresh source of motive power, such as petroleum, which can be distributed along wires or pipes from a common centre over a wide area, might lead to the revival of the domestic system of industry. But there are various economies of management, and of purchase and sale, which lend an advantage to production on a large scale (*see* INDUSTRIES, LARGE AND SMALL); and these would continue to operate, even if a fresh motive power, or source of motive power, were generally introduced. And they would probably outweigh, except in certain occupations where the domestic system is still found, the benefits of the close personal interest which is felt, and of the continual watchfulness which is exercised, by the small master. It should be noted that some of the instances, which now exist, of the domestic system meet with censure rather than approval on the part of the public. What is known by the ambiguous term of the SWEATING system seems to be in reality one variety of the domestic system of industry. In many cases it appears to be a system under which work is carried on in the houses of small masters; and the conditions of labour of the chain-makers and others in some parts of England are so far similar to those of the workers under the sweating system in London

that they are instances of a domestic system of industry which has earned the severe censure of popular opinion. The characteristic evil of East London seems to be the multiplication in certain trades of small masters—the ease with which a man can start on his own account, and the reckless competition which of necessity ensues. It is the prosecution of industry in domestic establishments outside the sphere of the factory inspector; for the domestic system baffles that publicity, and tends to deaden that sense of responsibility to popular opinion, to which the employer in a large factory is subject. The domestic system, in short, may be said to be suited to a small population, a limited market, and an unbroken routine; it is unsuited to a large population where publicity is less easily attained, and to a world-wide market which is subject to rapid and continual change, and requires the sustaining resources of considerable capital and the exercise of bold and vigilant enterprise.

[For an account of the domestic system, as it formerly prevailed, the student should consult Toynbee, *Industrial Revolution*, ch. iv. and lecture ii., and W. C. Taylor, *Hist. of the Factory System*; and for a consideration of some of its modern illustrations, Booth, *Life and Labour of the People in London*, Series 1, vols. ii., iii., and iv., and Series 2, vol. i., and *Reports of the Committee of the House of Lords on the Sweating System*.] L. L. P.

DOMICIL. The domicil of a person is defined by Dicey as "the place or country which is considered by English law to be his permanent home." Lord Mansfield was perhaps the first to use this term in a legal decision in 1757, when he spoke of "domicil" and "place of abode" as synonymous. Two elements are involved: (1) "habitual physical presence" or "residence," and (2) "the present intention to reside permanently" or "indefinitely" within the limits of such place or country, or the absence of any present intention to discontinue such residence permanently or indefinitely. This has been termed the *animus manendi*. But domicil is a wider term than residence. By English law a domicil is ascribed to every person. Thus a married woman acquires the domicil of her husband; an infant, whether legitimate or legitimated, retains until marriage the domicil of his or her father, and if the father is dead usually that of the mother during widowhood; but if the mother abandons her domicil, leaving the child behind, the latter retains the domicil of his father; whilst the domicil of a posthumous or illegitimate infant is that of the mother, and changes with that of the mother, *e.g.* by her subsequent marriage, although she may abstain from changing the domicil of the child, if she pleases. On the Continent the general rule is that the infant's domicil remains that which it was at the time of the father's death, and can only be changed by act of law. Where both parents are dead the domicil of a legitimate infant, and where the mother is dead the domicil of an illegitimate infant, changes with the domicil of the guardian, and probably may be changed by him. The domicil of such persons is termed the domicil of origin, and this is retained until another domicil is acquired, which is termed the domicil of choice, although in the latter is included change of domicil by operation of law, *e.g.* on marriage or on change of domicil by an infant's father or mother or guardian. Persons in the service of the Crown abroad retain their domicil of origin. By English law every person *sui juris* may abandon his domicil of origin, acquire a domicil of choice, and change the latter whenever and as often as he pleases. Such domicil is determined by two elements: (1) the acquisition of an abode, and (2) the present intention of retaining it permanently or indefinitely. But the choice must be purely voluntary. A person who flees the country owing to political or criminal circumstances, retains his domicil of origin. So, too, a person who goes abroad merely for his health, intending to return upon recovery, also retains his domicil of origin however long he lives there. And where a man has homes in more than one country, preference will be given to the place where he resides with his wife and family, or where his principal mansion is situate, or where he exercises political rights, or where it is stated to be in his correspondence or legal documents, and so on. If these criteria are ambiguous, the Court will lean towards his domicil of origin. Up to 1870 the maxim *nemo potest exuere patriam* prevailed. But the Naturalisation Act 1870 provided that any British subject who became naturalised in a foreign State should from that time be deemed to have ceased to be a British subject and be regarded as an alien.

The importance of domicil lies in the fact that by English law personal rights are determined by domicil. The position is similar in the United States and generally in South America, but on the Continent the governing principle is that of nationality. To meet the difficulties caused by conflicts between these opposing principles, the English Courts will accept the reference back to the law which the foreign Court would have applied if the case had been tried in the foreign country. This is known as the doctrine of *renvoi*. The importance of domicil may be gauged by the fact that, for instance, the validity of a person's marriage, the legitimacy of his children, and the succession to his personal property are usually determined by his domicil. And in time of war enemy character is largely determined by the same principle. Neutral persons, for instance, residing and trading in enemy

territory are regarded as "enemies," whilst enemy persons residing and trading in neutral countries are not so regarded. By fiction a corporation is regarded as possessing a *persona* or entity of its own quite apart from its corporators. The domicil of a corporation is the place considered by the law to be the centre of its affairs, which (1) in the case of a trading corporation is where the "control" or the "brain and heart" are situate; (2) in the case of any other corporation where its functions are discharged. During the War of 1914 British and French Courts have held that they were entitled "to go to the bottom of things" and ascertain where the control was. For instance, a company registered in London and its directorate resident in Berlin would be regarded as enemy, although the majority of its shareholders might be British.

[Dicey and Keith, *Conflict of Laws*, 3rd ed., 1922; Westlake, *Private International Law*, 6th ed., 1923, by Bentwich; Foote, *Private International Jurisprudence*, 5th ed., 1924, by Bellot; Bentwich, *Law of Domicil*, 1911.]

H. H. L. B.

DOMICILE, Scotland. Examples: (1) A person's father—or, if he be illegitimate, his mother—was a domiciled Scotsman (or Scotswoman) at the time of his birth—*domicile of origin*; (2) A person, his own master, has become a domiciled Scotsman by actual residence with the intention of remaining in Scotland, and the result of quitting his native country, a circumstance which must be proved—*domicile of choice*; (3) An Englishwoman, say, marries a domiciled Scotsman; she becomes a domiciled Scotswoman — *domicile by operation of law*. There is a general presumption in favour of the domicile of origin as against the domicile of choice, and thus the domicile of origin is readily held to have been recovered on a Scotsman's return to Scotland from life abroad. These are forms of that domicile which govern the legitimation of children, the succession to movable (personal) property, and, in general, the family relations: this is the *domicile of succession*. There are still some delicate questions not finally decided as to the domicile necessary to give jurisdiction to the Scotch courts in cases of divorce. *Domicile of citation* is by custom the place at which a person may lawfully be cited to appear before the court, this being the place where he has resided for forty days until he has ceased for forty days to reside there; but this is a domicile for the purposes of procedure (see Jurisdiction, Scotland).

A. D.

DOMICILED BILL. A bill "drawn payable elsewhere than at the residence or place of business of the drawee" is said to be "domiciled." Such bills must be presented for acceptance before they are presented for payment, and if the holder, in consequence of this obligation to procure acceptance, cannot, with the exercise of reasonable diligence, present a domiciled bill in proper time for payment, he will be excused and the drawers and indorsers will not be discharged in consequence of the delay. Domiciled bills, whether accepted or not, must at maturity be presented at the place of payment, *e.g.* a bill in Liverpool payable in London remains unaccepted; the holder must, at maturity, present the bill in London, although no special address for payment be given; this can be done by handing the bill to a notary, who in his protest will declare that no address was given.

E. S.

DOMINIUM. Expression of Roman law denoting property in its fullest and most extended sense.

E. S.

DOMUS CONVERSORUM. See Jews in England.

DONATIO MORTIS CAUSA. A gift given by a person believing himself or herself near death, subject to the implied condition that it is to be returned should the anticipation of death by the existing disorder prove unfounded. A gift of this sort is invalid if the delivery of the object of the gift remains incomplete, *e.g.* an unindorsed bill of exchange handed over to the donee by way of *donatio mortis causa* cannot be retained after the donor's death.

E. S.

DONATION (Scotland). Gift, free or for some cause not enforceable by law. Must in general be explicit, and adequately proved; and is then enforceable if the subject be not yet delivered to the donee. Fathers and grandfathers may revoke gifts to children or grandchildren so far as to secure themselves a competence in the event of indigence. Free gifts between husband and wife are revocable at any time during the life of the donor, even after the death of the donee; but not if there have been a legal or a natural obligation to make the provision made. In doubtful circumstances it is generally presumed there is no donation; a debtor is not presumed to make a gift to his creditor; but these are really jury questions.

A. D.

DONATO, Nicolo, a Venetian who lived in the 18th century, known by his book on politics, which contains a treatise on public finance: *L' uomo di governo*, trattati due, Verona, 1753. This was translated into French: *L' Homme d' État*, par Nicolò Donato, Liège, 1767. In his book there is a classification of public finance under seven headings, and a statement giving details of public expenditure relating more particularly to the Venetian state.

M. P.

DON GRATUIT. The Décimes (*q.v.*), the ordinary contributions of the clergy, were not sufficient to satisfy the French monarchy in the 17th and 18th centuries. The clerical assemblies were frequently called upon to make additional payments, and these grants, in theory voluntary, grew under Louis XIV. into

a practically compulsory payment of about 15,000,000 livres (£600,000), renewed every five years. This *don gratuit*, as it continued to be called, was nearly always raised, not by taxation, but by loan. The credit of the clergy was so good that it was easier for them to borrow than it was for the government. According to Necker the clerical debt, raised for payment of the *don gratuit*, amounted in 1784 to 134,000,000 francs. The Marquis du Bouillé, in his memoirs, asserts that the interest upon this debt was paid out of the DÉCIMES (*q.v.*), and thus reduced the nominal contribution to the state to such an extent that the church was a source of expense rather than of revenue.

[Necker, *De l'Administration des finances de la France*, tome ii.—Gasquet, *Mémoires du Marquis du Bouillé*, p. 44.—*Précis des Institutions politiques et sociales de l'ancienne France.*] R. L.

DORIA, PAOLO MATT., born in Genoa 1675, died at Naples 1743. He wrote principally on mathematical and philosophical subjects. He lived nearly all his life at Naples, and is known to have been a friend of Vico. In his political tract *La vita civile con un trattato della educazione del Principe*, published for the first time in 1710 and republished in 1852 (Turin), he seeks to prove that the administration of a state by a prince, in its object and in its means, is qualitatively identical to that of private interests by private people, and is only more complex. The one fundamental rule for a sound administration of the state is a financial rule which consists in burdening the tax-payer least, whilst the prince takes most from him, and in taxing in such a manner "that although paying much, everybody should think he is paying little." Doria is a strict follower of St. Thomas Aquinas in his theories concerning the relative importance of agriculture and manufactures, in the functions attributed to money, and in his opinions about commerce. He has to be classed amongst the most inveterate of the mercantilists.

M. P.

DORMANT (or SLEEPING) PARTNER. A partner who takes no active part in the business of the firm, and who is not known to be a partner. Such a partner is liable for the acts of his co-partners in the transaction of business in the ordinary way, but he has no authority to bind the firm.

[Sir F. Pollock, *The Law of Partnership*, London, 1890.] J. E. C. M.

DORMER, DIEGO JOSÉ, was born in Saragossa during the first half of the 17th century. He graduated as doctor of law at the university of Huesca, and became later on general chronicler of the kingdom of Aragon and archdeacon in the metropolitan church of Saragossa. He was all his life a most devoted and abundant historical writer.

In 1684 he published in Saragossa his *Discúrsos históricos-políticos*, a very scarce book, in which, according to Don Manuel Colmeiro (*Biblioteca de los Economistas Españoles*) he "explains with exquisite clearness the true character of commerce, the nature of exchange, the use and utility of money, and the inefficiency of the prohibitive system. . . . It is one of the most original works of its class, bold and precise in its economic doctrine. The author is greatly in advance of his time, and deliberately puts aside the prevailing prejudices, not only in Spain, but throughout Europe."

[For a complete list of his works, see Latasa, *Biblioteca Nueva de Aragon*, iv. p. 197.]

E. Ca.

DOS. Expression of Roman law for the property brought by the wife into marriage. During the continuation of the marriage the wife retained the ownership, but the husband had the right of management and enjoyment. After the dissolution of the marriage the rights of the parties varied according to the special circumstances of the case. E. S.

DOSES (OF CAPITAL). A term introduced by James Mill (*Elements of Political Economy*) to denote the portions of capital which, according to the theory of RENT (*q.v.*), will be successively applied to land up to the point at which the portion last applied affords only ordinary profits. As Jevons observes (*Theory of Political Economy*, 2nd ed. p. 232), "He evidently means by a *dose of capital* a little more capital, and though the name is peculiar, the meaning is simply that of an *increment of capital*. . . . It is mere pedantry to insist upon calling that a *dose* in economics which in all the other sciences is called by the perfectly established and expressive term *increment*." As the equivalent of "increment," *dose* may be employed wherever the reasoning requires that we should consider a variable quantity as increased by degrees up to the MARGIN (*q.v.*) at which further increase ceases to be advantageous. Thus, Prof. Marshall speaks of a dose of labour as well as of capital (*Principles of Economics*, book iv. ch. iii. §2). Some difficulties attending the use of the term "dose of capital" are cleared up by Prof. Marshall at the end of the chapter referred to. F. Y. E.

DOUANE (*Fr. Customs*). The earliest customs duties in France, as in England, were levied upon exports, and arose from the practice of buying permission to transport goods from the kingdom in spite of royal edicts prohibiting exportation. Import duties seem to have arisen from the fact that foreign merchants had to purchase leave to carry on trade in France, and hence came the practice of apportioning their payments to the goods which they introduced. These customs duties were originally called *droits de haut passage*. The name *douane* was introduced later, and was borrowed

from the Venetian term *dogana*. The great difference between France and England, which illustrates the much later development of unity in the former country, lies in the fact that the *douane* is originally a provincial, not a national charge. Every province had its own customs duties, often of great intricacy and variety; and these charges, dating from the days of provincial independence, were maintained as a source of revenue, after the provinces had been absorbed by the central monarchy. It did not require much economic insight to understand the enormous hindrance which such a system opposed to the development of internal trade and production. Colbert, the most practical if not the most enlightened of French financiers, made a vigorous attempt to abolish the provincial *douanes*, and to have no custom-house, except on the frontier, but he was successfully resisted by the "local protectionists." He succeeded, however, in establishing, in 1664, a sort of *zollverein* in twelve of the most important provinces, called the *cinq grosses fermes*, within which the circulation of goods was to be free. Beyond these were the *provinces réputées étrangères*, which refused to accept Colbert's scheme and retained their local customs, and the *provinces étrangères*, those which were added to the crown after 1664, and received special privileges at the time of their union. Colbert also succeeded in simplifying and making more uniform the charges which he failed to abolish. The system, as he left it, lasted with slight modifications till the Revolution, when the provinces disappeared, and with them the last trace of the provincial *douane*. R. L.

DOUBLE ENTRY. See Book-keeping.

DOUBLEDAY, Thomas (1790-1870), son of a soap manufacturer in Newcastle, was a radical of Cobbett's stamp, of great influence during the agitation for the Reform Act of 1832. He deserves notice here chiefly for his book on *The True Law of Population shewn to be connected with the food of the people*, London, 1841, 2nd ed. 1843, which contained in an expanded form a theory he had brought forward in a letter to Lord Brougham in *Blackwood's Magazine*, March 1837. This theory, which he describes as a "great general law," is that "whenever a species or genus is endangered, a corresponding effort is invariably made by nature for its preservation and continuance by an increase of fecundity or fertility," the state of low nourishment or "depletion," being thus favourable while high feeding or "repletion," is unfavourable to fertility, both in vegetables and animals. Fertility is in inverse ratio to nutriment, even in the case of human beings. In poor and ill-fed communities population increases in the ratio of the poverty and poor living; in a highly-fed and luxurious nation population decreases and decays. He shows a goodly list of examples, from the English peerage to Pitcairn Island, to countenance his conclusion. In his 9th chapter he uses his knowledge of the tallow and soap trade to support the position that there had been a decrease in the consumption of meat in England. But his law is an empirical uniformity of which he has not traced the deeper causes. Physiologists and biologists have emphatically pronounced against him. (See Dr. Charles Loudon, *Problème de la Population et de la Subsistance* (quoted by Doubleday himself); and Herbert Spencer, *Biology*, vol. ii. pt. vi., *Law of Multiplication*, ch. xii. pp. 455, 480, 483 note; Darwin, *Descent of Man*, vol. i. ch. iv. 132, ed. 1871.)

The book is indirectly an attack upon Malthus; but the Essay on Population is more directly criticised in Doubleday's *Financial, Monetary, and Statistical History of England from 1688 to the present time in 17 letters addressed to the Young Men of Great Britain*, 1847, Letter x., pp. 206 *seq.* The writer falls into the vituperative style of his master Cobbett.

Other writings of Doubleday are:—

Letters in the Newcastle Chronicle on the Petition of the Chamber of Commerce, Newcastle-on-Tyne, for the Continued Circulation of Local One Pound Notes (which he opposes), by a Member of the Chamber, 1828.—Two Letters to Lord Althorp in Cobbett's *Register*, 13th April and 25th May 1833 (on excise duties on soap). *Political Life of Sir Robert Peel*, 2 vols., 1856.—*Touchstone*, a series of political letters addressed to the newspapers, republished, with a preface by John Paul Cobbett.—*On Mundane Moral Government and its Analogy with Material Government*, 1852.—*Matter for Materialists, a letter in vindication of Bishop Berkeley*, 1870. He wrote also a romance, *The Eve of St. Mark*, and several stage plays, *Diocletian*, *Caius Marius*, etc.

[See "Life" by G. J. Holyoake in the *Dictionary of National Biography*.] J. B.

DOUBLE-FLORIN, English token silver coin of the nominal value of 4s., first struck in 1887, the year of Queen Victoria's Jubilee, in pursuance of a royal proclamation. It was of precisely the same design as the florin. Weight 349·09 grains, fineness 925. Value in silver francs (900 fine), 4·64 francs. This coin has ceased to be issued. F. E. A.

DOUBLE STANDARD. See Bimetallism; Standard of Value.

DOUBLOON, History of. A gold coin of Spain, prior to the adoption of the monetary system of the Latin Union. The name "doubloon" has been diverted by general consent from the Spanish pistole or *double* escudo (whence "doblon" in Spanish) to the quadruple pistole, or "doblon de á ocho." Like the Dollar (*q.v.*), the doubloon was a multiple, and not a unit. Corresponding to the silver unit, or real, was the gold unit, or escudo (=$2), concerning the standard of which the emperor Charles V. and

his mother Donna Juana enacted, in 1537, that "the escudos which we have commanded to be struck shall be 22 carats fine, and shall weigh 68 to the mark of gold of our kingdoms of Castile, which is the fineness and weight of the larger escudos of Italy." As this makes the gross weight of the escudo 52·2 grains troy, the escudo was thus practically a ducat (see DUCAT). From 1537 to 1772 the 8-escudo piece or "doubloon," was 916·6 fine per mille, reduced in 1772 to 901, and in 1786 to 875, the legal weight remaining 417·6 grains troy from 1537 up to 1848. Both in 1772 and in 1786 the reduction in fineness was effected not by a public law, but by a *Real órden reservada* addressed to the mints. The doubloon (Peso Duro de Oro) never had the universal currency of its silver analogue the dollar: and even in the New World it was hard pressed by its Portuguese competitors, the "moidore" and the "johannes." The reason, in the words of Newton, was that "gold in Spain is of 16 times more value than silver of equal weight and allay. But this high price keeps their gold at home in good plenty, and carries away the Spanish silver into all Europe." The Spanish doubloon was succeeded after 1821 by various South American doubloons, which enjoy a limited currency in the New World, and are specially quoted in the London bullion-market. In 1848 the "doblon d'Isabel" was introduced in Spain, to be supplanted by the 20-peseta piece on the entry of Spain into the Latin Union.

As the fine content by law was (1) 382·8 grains from 1537 to 1772, (2) 376·2 grains from 1772 to 1786, and (3) 365·4 grains from 1786 to 1848, in theory the sterling value of the doubloon (at £3 : 17 : 10½ per oz. of standard gold) was (1) £3 : 7 : 9, (2) £3 : 6 : 8, and (3) £3 : 4 : 8 for the same three periods respectively; but the results of assays reduce these values roughly by the odd pence. Thus, after 1786, the sterling value of a doubloon as issued was £3 : 4s. (see DOLLAR). R. C.

DOUBLOON. Spanish gold coin, not struck since 1868, when the peseta (franc) system of currency was adopted. Weight 129·43 grains, fineness 900. Value: English standard (916·6 fine, at £3 : 17 : 10½ an oz.) £1 : 0 : 7½; French standard (900 fine) 26 francs. Similar coins of slightly varying values circulate in the South American republics and in Mexico.

The old doubloon or *onza* weighed 418 grains, fineness 875,—value, English standard £3 : 4 : 9, French standard 81·6 francs. This coin is still current in Spain, Mexico, and the South and Central American republics.

A doubloon (or 4-dollar piece) is current in the Philippine Islands. Weight 104·4 grains, fineness 875. Value: English standard 16s. 2d.; French standard 20·4 francs. F. E. A

DOUGLASS, WILLIAM (about 1691-1752) was born in Gifford, Scotland; he settled as a physician in Boston in 1718; and wrote much on medical subjects. He wrote a valuable *Summary, historical and political, of the first planting, progressive improvement, and present state of the British Settlements in North America*, Boston and London, 1755, in which frequent reference is made to the paper currencies of the several colonies. He was especially interested in the monetary policy of Massachusetts, and contributed to discussions on the subject of a land bank and paper bills: *An Essay concerning Silver and Paper Currencies more especially with regard to the British Colonies in New England*, Boston, 1738, pp. 23 (a direct reply to a contemporary pamphlet, *Some observations on the scheme projected for emitting 60,000 l. Bills of a new tenour, to be redemed with Silver and Gold, showing the various operations of these Bills and their tendency to hurt the Publick Interest*, Boston, 1738, pp. 25, which has itself been erroneously attributed to Douglass); *A discourse concerning the currencies of the British plantations in America*, etc., Boston, 1740, pp. 47 (also with *Postscript*, pp. 47-62). This was reprinted in London in 1751, and is included in a collection of tracts on *Paper Currency*, edited by Mr. J. R. M'Culloch, printed by Lord Overstone in 1857. It is referred to in Smith's *Wealth of Nations*, bk. ii. ch. ii. Douglass clearly sums up and accounts for the infatuation for issues of paper money which prevailed at that time. The following reasons are assigned: that usurers might be prevented from imposing high interest upon borrowers; the scarcity of silver money, which was shipped away to settle foreign balances; that it might be available to meet the demands of a growing trade; and to relieve debtors, "since by large emissions lands rise in denomination value, and debts become really less."

[*A Brief memoir of William Douglass, M.D.* By Timothy L. Jennison, M.D., in *Med. Com. of Mass. Med. Soc.*, Boston, 1836, vol. v. pp. 195-240.]

D. R. D.

DOVE, PATRICK EDWARD (1815-1873). Dove is one of the first notable writers of the 19th century who advocated the complete nationalising of the land. In his *Theory of Human Progression and Natural Probability of a Reign of Justice* (dedicated to Victor Cousin) (Edinburgh) 1850, Dove lays down the philosophical foundation of his theories of reform. Three things are, in his view, indispensable to the well-being of the human race—(1) the Bible, (2) "a right view of material phenomena," (3) "a right view of mental phenomena." The science of politics gives us a right view of equity or justice, and leads us to the conclusion that humanity progresses from diversity of privileges to an absolute equality of rights; it points the way to a reconstruction of the natural and God-given order of society, from which the political institutions of actual history have so widely departed. We shall reach the millennium,—

first in mathematics, when *all* mathematical truth is discovered and applied, then in the physical and mechanical sciences and arts, and then in political science. The perfection of the last would bring the political millennium, and one of its conditions would be the abolition of the private ownership of land. This is Dove's central proposition. Though he is not otherwise communist or even socialist, he demands that the land should be held in common. His arguments are given at length in his later book *Elements of Political Science* (Edinburgh), 1854; but they are sketched in the earlier with substantial completeness. Legislation is needed not to grant rights but to secure rights already granted by nature, the chief being liberty and property. There is a progress towards absolute equality in regard to "natural property"; "the earth and all it contains belongs 'for the time being' to the existing generation," and its distribution must not be determined by the dispositions of past generations, when these have been contrary to equity. The assignment to private owners, for example, of the abbey lands, under Henry VIII., is "now exactly equivalent to the imposition of a taxation on articles of consumption, equal to the present rental of those lands, so that those who are labourers have actually the rental of the land taken away from them in the shape of taxes; were there no taxes the alienation of the lands would be of comparatively minor importance." Taxation must fall either on land or on industry; and it is no burden to the community unless, as now, it is taken from land and left to lie upon labour. Political economy is a non-moral science, and unlike political science it is inductive and statistical; it simply traces the effects of certain human actions on social welfare. But the two studies mutually depend on one another. "In the arts man creates form; in political economy he creates value; in politics he creates property." Evolution must proceed from the arts to political economy before finally attaining in politics to the "rational system of property," an open career for all human talents and all burden of taxation borne by the rent of land. Dove thinks this system will be only introduced by a very gradual change of public opinion. He is no revolutionist, but he does not discuss the practical steps by which the change would be introduced with least friction. He is content for the most part to enlarge on the defects of the present system. That a shilling a day should be given to one who labours, and £1000 a day to one who does *not* labour, seems to him to set Solomon at defiance. His discussion of rent is suggestive; but his strength lies elsewhere than in purely economical argument, and his criticisms of older economists are often founded on misunderstanding. He was from the first a free trader. His sketch of Andrew Yarranton, "the genuine founder of political economy in England," is a useful contribution to economic history (see appendix to *Elements of Political Science*). A certain diffuseness of style may perhaps in some degree explain his failure to obtain the popular favour accorded to more recent writers of the same way of thinking, who have added nothing to his doctrines and have lacked his philosophical breadth.

[For a full list of the writings of P. E. Dove, and an account of his life, see *Dictionary of National Biography*.] J. B.

DOWER. The term dower is used in two totally different senses. In the first or popular sense it corresponds to the French *dot* and the Roman *dos*, a portion which the bride brings to assist in defraying the expenses of married life, whether originally her own or given by her father or other near relative. Over this portion the husband acquires certain restricted rights during the continuance of the marriage. In some countries, notably in France, it is a matter of course that every bride should have a dower, and one of the main objects of French thrift is to provide every daughter with a suitable dower. In England there is no general custom of this kind, although it is common for fathers in the middle and upper classes to settle some property on a daughter when about to be married.

In the second, or legal sense, dower signifies the provision to which a widow is entitled out of the land of her deceased husband. At common law a widow was entitled for her life to one-third of the freehold lands of which her husband died possessed. When the title to dower had once attached, it could not be defeated by any act of the husband, and thus the right of dower became a serious obstacle to the alienation of land. Accordingly the statute of uses (27 Henry VIII., c. 10) enacted that when provision for the wife had been made by way of jointure, she should lose her right to dower. Subsequently the right of dower was often defeated by means of a technical contrivance known as a conveyance to uses to bar dower. But by the Act 3 & 4 Will. IV. c. 105, known as the Dower Act, the wife's right of dower in her husband's land was rendered liable to be defeated by any act of alienation performed by him, or by a declaration executed by him under seal or inserted in his will. In short the right of dower is subjected entirely to the husband's discretion. Under these circumstances the right of dower has ceased to have any importance. The making of a suitable provision for a widow is one of the principal objects of marriage settlements, and such a settlement is almost always made on the marriage of persons in the landowning class. The origin of the common law right of dower is found by Maine in the influence of the

mediæval church which was exercised in favour of the wife.

[Williams and Goodeve on *Real Property*—Kenelm Digby, *History of the Law of Real Property*.—Maine, *Ancient Law*, ch. vii.]

F. C. M.

DRACHMA. Greek modern unit of value equal to 1 franc, and divided into 100 lepta (centimes). Weight, 4·98 grains gold 900 fine, or 77·16 grains silver 900 fine. English standard value: gold (916·6 fine at £3 : 17 : 10½ per oz.) 9·52d., silver (925 fine at 5s. 6d. per oz.) 10·32d. The silver drachma piece is a token coin, 835 fine, weight 77·16 grains, value ·93 drachma. The smallest *standard* coin, both in gold and silver, is the five-drachma piece. Greece is a member of the LATIN UNION (*q.v.*).

Drachma was the name of the ancient Greek unit of value. The Attic drachma was a silver coin weighing about 66 grains. F. E. A.

DRAFTS ON DEMAND. See CHEQUES, LAW OF.

DRAGONETTI, GIACINTO (end of 18th century), a Neapolitan, wrote in 1767 a treatise on virtues and remuneration of virtue, *Trattato delle virtù e dei premi;* a spese di Giov. Gravier, 1767, in which he also discusses economic topics, and shows considerable knowledge of the most recent economic literature of his time. Agriculture especially is discussed by him and regarded as the pivot of the economic welfare of the state. He compares navigation to "a bridge crossing the seas which unites the whole inhabited globe"; he considers it so important that the state is bound to protect it. But social progress, though it takes its origin in agriculture and maritime commerce, must be maintained by a system which rewards virtue and punishes crime. Such a system would harmonise private with public interest, and—through private interest—encourage the promotion of public interests. M. P.

DRAGONETTI, LUIGI (early part of 19th century), wrote *Proposta di un novello piano di finanze per il Regno di Napoli*, 1820, Napoli, a book suggesting reform in the management of the finances of the kingdom of Naples, interesting as showing the defects existing at that date. Amongst other matters we find him urging on the government punctuality in payment of the interest on the public debt, in order to maintain the standing of the national credit, and to induce foreigners to invest capital. He recommends that the tax on land should be based on a cadastral survey (doomsday-book) and that personal property and capital employed in business should bear its fair share of the burden. Dragonetti advises that the tariff for the taxation of imports and exports should not be unduly high, and that it should frequently be revised, so as to bear a uniform proportion to the changes of values in commodities. M. P.

DRAIN OF BULLION.* The stock of bullion held by the Bank of England is subject both to all the influences which produce movements of bullion between different countries, and to all those which arise out of the condition of internal trade. Some of these latter are periodical in occurrence and almost regular in extent (see AUTUMNAL DRAIN), whilst others are occasional and uncertain in both respects, but all, whether internal or foreign, if occurring alone, carry with them the elements of reaction, and thus the average level is fairly maintained. When, however, two or more of these influences, acting in the same direction, have come into play at the same time, a drain of bullion from the Bank has resulted, producing danger and alarm, and requiring special efforts on the part of the directors to counteract it. Continued drains of bullion, of more or less importance, have been recorded as occurring in the years 1780-83, 1791-93, 1795-97, 1817-19, 1824-25, 1830-32, 1834-35, 1836, 1839, 1846-47, 1857, 1866, and 1914. The points most worthy of notice in these movements are: (*a*) their cause; (*b*) their duration and extent; and (*c*) the measures by which they have been relieved.

The causes have been both general and special. So far as the general causes can be classified, they may be grouped as below, the occasions upon which each one was most strongly in force being annexed.

GROUP I. DOMESTIC.

Joint-stock speculation	1824-25, 1834-36, 1847, 1866.
Banking panic	1793, 1824-25, 1836, 1847, 1857, 1866.
Commercial distress	1783, 1793, 1824-25, 1830-32, 1834-36, 1857.
Deficient harvests	1783, 1795-96, 1830-32, 1839, 1847.

GROUP II. FOREIGN.

Loans or subsidies	1793, 1795-96, 1824-25, 1834-36.
Joint-stock speculation	1825.
Commercial distress	1832, 1836-37, 1839, 1857.

It will be seen that no distinct line can be drawn between the groups, or the causes composing them. Commercial distress may give rise to banking panic, or *vice versa;* or either of these may be largely due to joint-stock speculation. So, also, a domestic cause may give rise to a foreign drain, as when a bad harvest leads to large importations of corn; or, a drain for foreign purposes may have a domestic origin, as in the granting of loans or subsidies, or floating foreign speculations on the home market. Or, a drain commencing in one cause may be

continued through other influences. There are also special causes to be found in almost every crisis.

In duration they have varied greatly. The earliest appear to have lasted during two or three years; thus, from August 1780 to October 1783; from August 1791 to February 1793; from February 1795 to February 1797; from August 1817 to August 1819. In these cases the records show continuous decline throughout each period, but as the figures are given only for February and August in each year, there may have been intermediate increases. In 1824-25, 1830-32, 1834-35 the decline lasted from one to two years, and in later times the movement extended over but a few months.

PERIOD AND EXTENT OF DRAIN.

	From Maximum to Minimum.			
		£		£
1780-83	Aug. 1780	4,179,000	Oct. 1783	*473,000*
1791-93	Aug. 1791	8,056,000	Feb. 1793	*4,011,000*
1795-97	Feb. 1795	6,128,000	Feb. 1797	*1,086,000*
1817-19	Aug. 1817	11,668,000	Aug. 1819	*3,595,000*
1824-25	Feb. 1824	13,800,000	Dec. 1825	*1,261,000*
1830-32	May 1830	11,418,000	May 1832	*4,919,000*
1834-35	Mar. 1834	8,901,000	May 1835	*5,951,000*
1836	22nd Mar.	8,064,000	29th Nov.	*3,840,000*
1839	1st Jan.	9,048,000	10th Sept.	*2,412,000*
1846-47	29th Aug. '46	16,366,000	23rd Oct.'47	*8,313,000*
1857	18th July	11,841,000	18th Nov.	*6,485,000*
1866	21st Mar.	14,456,000	23rd May	*11,858,000*

These figures should be studied in connection with some others that cannot be shown here, as the proportion held by the outflow to the initial stock: or with the average of the preceding year or period, and the rate of the decrease. For the years since 1844 a most important consideration is the state of the banking reserve. This it was that gave to the drain of 1866 an importance beyond that which would appear to attach to the figures as given above.

Since 1866 the outflow has rarely taken the form of a persistent drain, whilst the average stock having been much higher, decreases of considerable amount have not caused so much alarm. Movements of this character took place in 1876 when the bullion decreased from £29,394,000 on 18th August to £21,704,000 on 29th December; and in 1879 when from £35,694,000 on 30th July, it fell to £27,602,000 on 31st December. In each case the initial stock was very much beyond the average of preceding years, and the reserve was also abnormally large.

The manner in which a drain of bullion should be encountered has been the subject of much controversy, and very different methods have been followed at different times. In 1783 the directors laid down the maxim that a drain should be met by contracting their issues until the exchanges became favourable, and they were successful in acting upon these lines. In 1798 relief was obtained by extended powers being granted for the issue of exchequer bills. In 1797 the drain was only arrested by the passing of the Restriction Act, and the subsequent suspension of cash payments. In 1819 the directors communicated to the House of Commons a resolution denying that the exchanges were to be regarded in regulating their issues. In 1825 the Bank endeavoured, in May, greatly to contract their issues, but finding that the outflow continued at an accelerated pace, they adopted in December exactly the opposite policy, and lent money freely. In 1830-32, and 1834-35, the outward movement appears to have been suffered to run its course without any special measures being taken. In 1836 the pressure was met by a generous policy, and large advances were made by the bank.

Up to this date the policy of the Bank fluctuated between leaving matters to right themselves, or taking action by contracting their issues, or by freely extending them. The plan of raising the rate of discount was not in any case adopted. It was, indeed, not so fully available as now, nor was it equally likely to be effective. The transit of bullion was more expensive and less expeditious, and a larger rise was necessary to produce an influx. There was also less floating capital ready for employment in any market offering, and therefore less probability of attraction by increased rates. Upon at least one occasion in earlier years a serious drain of bullion had occurred in the face of favourable exchanges. During all these years the USURY LAWS (*q.v.*) were at least nominally in force. No doubt in practice they were largely evaded, but they could not be publicly disregarded by the Bank of England. It was not till 1833 that these laws were relaxed at all, and they continued partly in force for twenty years longer. But in fact the directors did not make full use of such powers as they even then possessed. From June 1822 till July 1836 the bank rate remained at 4 per cent, with the exception of the period from December 1825 to July 1827, during which it was maintained at 5 per cent.

During the drain of 1839, which was more serious than any then on record, the rate was raised, on 20th June, to 5½ per cent, and on 1st August to 6 per cent, these being the first occasions since 1695 on which the official rate had been placed above 5 per cent. Since then, in seasons of pressure, recourse has always been had to increased rates of discount. In 1847 it was raised to 8 per cent; and in 1857, 1866, and 1914 to 10 per cent. The second occasion is noteworthy as one where a high rate failed to attract gold, as the bullion decreased by 2½ millions from 21st March to 30th May, notwithstanding that the rate was raised by successive stages from 6 per cent to 10 per cent. Yet during the same period the Bank of France, with a rate not exceeding 4 per cent, was constantly gaining gold. This was due to the great doubts felt on the

Continent as to the state of commercial credit in England. In later years, when an efflux of gold has been anticipated, it has generally been prevented by a timely rise in the bank rate.

One other point in connection with drains of bullion requires notice. It is an almost invariable experience that such movements have an immediate effect upon the notes in reserve, instead of acting upon the circulation, as was expected by the framers of the Act of 1844. The following instances illustrate this clearly:

BANK OF ENGLAND.

1846-7.	Bullion.	Note Reserve.	Circulation.
29th Aug. 1847.	£16,366,000	£9,450,000	*£20,426,000*
30th Jan.	12,902,000	5,704,000	*20,469,000*
17th Apr.	9,330,000	2,558,000	*20,243,000*
30th Oct.	8,439,000	1,177,000	*20,833,000*

1857.	Bullion.	Note Reserve.	Circulation.
18th July	£11,841,000	£5,687,000	*£19,978,000*
12th Oct.	10,110,000	4,024,000	*19,990,000*
11th Nov.	7,171,000	958,000	*20,183,000*

In both instances the bullion was decreased by 50 per cent, whilst the circulation remained almost unaltered. Upon the next occasion the decrease of bullion was attended by a much greater decrease in the reserve of notes, whilst the circulation increased by more than 25 per cent.

1866.	Bullion.	Note Reserve.	Circulation.
21st Mar.	£14,456,000	£7,918,000	*£20,636,000*
9th May	13,156,000	4,951,000	*22,344,000*
30th May	11,878,000	415,000	*26,019,000*

An important movement in the opposite direction, of more recent occurrence, illustrates the direct action upon the reserve, instead of upon the circulation, of an influx of bullion.

1907.	Bullion.	Note Reserve.	Circulation.
2nd Oct.	£37,106,838	£25,636,348	*£29,920,490*
6th Nov.	28,725,225	17,694,795	*29,480,430*
18th Dec.	33,076,729	22,399,284	*29,127,495*

For situation in 1914 see DRAIN OF BULLION, App.

[For history: H. D. M'Leod, *Theory and Practice of Banking*, also *Reports* of Parliamentary Committees on the Bank of England, Banks of Issue, etc. For fluctuations in circulation and effect on Bank of England Rate, see Sir R. H. Inglis Palgrave, *Bank Rate and the Money Market*, 1903; also Documents 492 and 578, U.S.A. National Monetary Commission, 1910, by the same author.] R. W. B.; F. W. G.

DRAKE, JAMES (1667-1706-7), born at Cambridge, became M.D. in London in 1694, and Fellow of the College of Physicians in 1706. His high Tory pamphlets, among which two especially deserve attention, were the cause of much persecution to him. Besides being the author of medical treatises he wrote anonymously *A Short History of the Last Parliament*, 1699, in which he refutes the opinion that exchequer bills had the nature of "money" created by government, and shows them to be mere money-saving instruments of credit. In his pamphlet *An Essay concerning the Necessity of Equal Taxes and the Dangerous Consequences of the Encouragement given to Usury among us of late years. With some Proposals to promote the Former and give a check to the Latter.* By the author of the *History of the Last Parliament*, London, 1702, Drake argues that money should be taxed by reducing interest, and that public credit "be rais'd to a Par with the best private security, and that no higher Interest or Praemium be allow'd upon it." This end will be answered "by a just and equal Tax obliging all Ranks and Degrees of men to pay to the support of the Government in proportion to their share in the Publick and the benefits they reap from it" (p. 5). He contends that "for the eleven first years of the late war, 10s. in the £ per annum, principal and interest, was paid by land, under which latter name husbandry, manufacture, and trade are comprehended as having their existence from and being no more than the product and improvement of land, which is the principal stock, and gives birth and maintenance to them all" (p. 2). This passage, as well as his struggle against stock-jobbing and trading companies, connects Drake with authors like Asgill, Barbon, Briscoe, and other Tory writers on finance.

[*Dictionary of National Biography*, vol. xv. pp. 446-447, where the last-named tract is omitted; for the first tract see Philippovich, *Die Bank von England*, 1885, p. 68.] S. B.

DRAPIER'S LETTERS. In 1722 Ireland complained of the want of copper coin. Copper had apparently been undervalued as compared with silver, and in consequence had been driven from the country. In its place a number of tokens and worthless coins had been used as small change. The English government decided to remedy what was an undoubted grievance. Unfortunately Ireland, unlike England and Scotland, had no public mint, so that coinage was a subject of private contract, and such contracts, in the eighteenth century, were invariably occasions for jobbery and corruption. On 21st Sept. 1723 a patent was issued to William Wood to coin copper to the value of £108,000. The economic and other objections to the patent were unanswerable. Wood himself had purchased it for £10,000 from the Duchess of Kendal, George I.'s mistress. That his own profits would have been excessive is proved by the fact that he was compensated for the withdrawal of the patent by a pension of £3000 a year for eight years. The total issue was ridiculously out of proportion to the needs of the country, as it was estimated at more than a fourth of the whole currency. Finally the issue was debased. A pound of copper was worth at the outside 13d.; in England it was coined into 23d.;

but by Wood's patent it might be coined into 30d. To these objections it must be added that no Irish official, not even the lord-lieutenant, or the council, had been consulted about the terms of the patent.

The patent was itself a scandalous job, and it was also a needlessly irritating assertion of English sovereignty. Irish opinion was roused, and both houses of parliament, usually submissive, petitioned against the scheme. A haughty and threatening answer on the part of Wood only added fuel to the flame. In 1724 Swift came forward as the mouthpiece of the prevalent discontent in a series of letters which were signed M. B. Drapier, and professed to be the work of a Dublin tradesman. The importance of the letters is political rather than economic. Swift had no practical or theoretical grasp of currency questions. He made no attempt to state the real objections to the new coinage. On the contrary he adopted all the prevalent prejudices, and exaggerated and illustrated them with that suppressed yet masterful irony in the use of which he has never been surpassed. In the famous fourth letter he quitted the immediate question at issue, denounced the abuses of English misgovernment, and asserted the rights of the Irish nation to independence. The printer of the letter was prosecuted, but the jury rejected the bill in spite of judicial browbeating. The author, though his identity was notorious, was left unattacked, and the government found it necessary to yield to the storm which it had provoked. The whole importance of the episode lies in the impulse which it gave to the opposition to English rule in Ireland.

[The letters are to be found in Swift's collected works. For comments on them, see Craik's *Life of Swift*;—Lecky's *History of England in the Eighteenth Century* and *Leaders of Public Opinion in Ireland*;—Stanhope's *History of England*.] R. L.

DRAWBACKS. In theory a drawback is a portion of the "mercantile system," and is intended to promote and encourage the exportation of commodities. It consists in the repayment of a duty which has been already paid in connection with the manufacture of the commodity in question, such repayment to be made on its export. Theoretically, therefore, drawbacks correspond to, and are similar to, BOUNTIES (*q.v.*), with this distinction—that a bounty is a direct gift to the exporter of goods, while a drawback should be merely the remittance of a tax in his behalf. It is this difference which caused Adam Smith to hold drawbacks to be the most reasonable form of encouragement to exportation; because, although they must from their nature favour certain classes of exporters, they cannot operate so as to draw more trade into any particular channel than would have been drawn had neither the tax nor the remittance of it existed: in other words, they simply cancel the tax and leave trade free to follow its most natural course. It must always be remembered that Smith held very strong views in favour of absolute non-interference with industry, and was consequently averse to indirect taxation. Drawbacks may be manipulated so as to have the same effect as bounties and other devices for encouraging exportation. Where this is the case there is not only a loss of revenue to the country which repays the tax, but a subsidy is given on exports which amounts to paying the foreign consumer to buy certain goods.

Drawbacks, it will be seen, are much more restricted in their nature than bounties. As worked in this country they are comparatively unimportant. They are of no use in encouraging a rising industry in a new country, and are generally granted simply for the purpose of increasing the amount of export trade. Adam Smith's discussion of them (bk. iv. chap. 4) may be read with great interest. J. S. Mill, in bk. iv., where he deals with the various forms of protection, adverts to drawbacks; and generally all modern economists, who have written on the subject of political economy at large, treat of drawbacks along with bounties.

M. G. D.

DRAWER OF A BILL OF EXCHANGE. The person giving the order to pay contained in a bill of exchange is called the "drawer." If the bill is not paid at maturity, he is bound to reimburse the holder, provided that all the necessary formalities have been observed (presentation in proper time, notice of dishonour, protest in the case of foreign bills, etc.) (See BILL OF EXCHANGE.) E. S.

DRAWING. This word is used to announce the redemption of certain bonds, as the borrower applies a periodical sinking fund to that purpose. The practice was originally connected with the simple process of drawing lots. A borrowing government, for example, may engage to pay off 1 per cent of its loan every year, and then the question arises as to which bond out of every hundred in circulation shall be redeemed in order to make the redemption fair. A drawing is announced, the function being attended by public officials and other persons of unimpeachable integrity, and the bonds which happen to be drawn by lot are then advertised for repayment at par, or at whatever the stipulated price of repayment may be. Cases have been known in which holders of drawn bonds have gone on receiving dividends in ignorance of the drawing, and other cases are on record in which the drawn bonds having been sold on the stock exchange, it has been discovered several months or years afterwards that the said bonds were not a good delivery (see DELIVERY, GOOD). A question also has arisen where, if a borrowing government formally promises the drawing of 1 per cent of its

debt each year, it is really empowered also to redeem 2 or 3 per cent, or even the whole of the outstanding debt, and in the years of active redemptions—1888-90—borrowers found it so easy to raise fresh loans at diminished rates of interest that they were continually exceeding the rate of redemption by drawing beyond the proportion originally stipulated. The system of drawing is not altogether commendable, and was originally employed to give a kind of speculative attraction to bonds which would otherwise have been neglected by steady investors. That is, the objectionable element of hazard enters into the question, which ought to be purely one of the solidity of the borrower. A. E.

DRENGAGE. A form of land tenure, common in, if not confined to, the district comprised in the ancient kingdom of Northumbria. Drenghs are mentioned in Domesday and in the survey called the Boldon Book. Sir Henry Ellis says: "The *drenchs* or *drenghs* were of the description of allodial tenants . . . and from the few entries in which they occur it certainly appears that the allotments of territory they possessed were held as manors" (*General Introduction to Domesday*, tom. i. fol. 269). But, as menial services were required of them or their servants, at least in Durham, they must have been inferior to military tenants. The instance in the Pipe Rolls of Westmoreland, 25 Henry II. of the enfranchisement of *drenghs*, and the particulars given in the records of the palatinate as to the services attached, show that *drengage* was by no means a free tenure. The services of a *drengh* were to plough, sow, and harrow portions of his lord's land, to keep a dog and horse for his use, attend the chase with him, etc. "A drengage seems to have consisted of sixteen acres to be ploughed, sown, and harrowed" (Blount's *Fragmenta Antiquitatis*). The word is derived by Greenwell, in his glossary to the Boldon Book, from the Anglo-Saxon "dreogan," to work. Another derivation is from the Danish "dreng" a servant or boy. Spelman, however, defines *drenghs* as those who at the coming of William the Conqueror were put out of their lands and afterwards restored by him on proof of ownership (Tomlins), and Cowel says "drenched" is an obsolete word meaning "overcome," and compares the German "tringen" (see also Cornage).

[Prof. Maitland, *Engl. Hist. Rev.*, October 1890.—*Notes and Queries*, I. vii. 137, 298.—Seebohm, *Village Communities*, 71.] H. Ha.

DRINKS, Taxes on. See Taxes.

DROFLAND, or Dryfland. Apparently an ancient service in the nature of driving the lord's cattle to the fair, commuted for a quit-rent; but according to Cowel (*Interpreter*, *s.v.*) a due payable to the lord for the right of passage with cattle through the manor (see Thistle-Rent). H. Ha.

DROIT, ANNUEL. See Paulette.

DROITS OF ADMIRALTY. In England the Lord High Admiral (an office that has still a legal existence) has the benefit of all captures made at sea by non-commissioned vessels, and also of all captures of ships or goods made in the ports of England and Ireland through vessels coming in by stress of weather or other accident, or by mistake of port or by ignorance, not knowing of the war, and also of all derelicts.

By the 1 & 2 Vict. c. 2 it was enacted that the profits derived from droits of admiralty should be paid into the exchequer for the benefit of the state. Phillimore's *International Law*, vol. iii. London, 1873. J. E. C. M.

DROITS D'AUBAINE. See Aubaine.

DROZ, Joseph, born at Besançon in 1773, died at Paris 1850. The incidents of his life were varied, and so were his opinions. Belonging to a family of high legal standing, he commenced life as a volunteer when the Revolution broke out; but afterwards laying down his arms, became professor of rhetoric at the central school of Besançon. He subsequently returned to Paris, where he was closely associated with the habitués of the *Société d'Auteuil*. The members of this club, who were Epicurean in spirit and taste, in most things kept themselves detached from the life of the 19th century. He derived from this association a fund of sanguine optimism which never failed. Towards the close of his life, he came under the influence of religion. He joined the *Académie française* in 1824, and the *Académie des Sciences morales et politiques* in 1833. In 1829 he published his *Économie politique ou principes de la science des richesses*, 1 vol. in 8vo, a valuable work, but one in which he fails to distinguish, with sufficient exactness, moral from economic precepts. He also published in 1839-42 the *Histoire du règne de Louis XVI. pendant les années où l'on pouvait prévenir et diriger la Révolution française*, 3 vols. in 8vo. The dual title of this work is a sufficient indication of the line of thought pursued in it and the object proposed. A. C. f.

DRUMMOND, Henry (1786-1860), banker, economist, and theologian, was the eldest son of Henry Drummond (*d.* 1794). He was brought up by his maternal grandfather, Viscount Melville, and was educated at Harrow and Cambridge, but took no degree. He became a partner in the well-known house at Charing Cross, and for many years had a leading share in its administration. Between 1810 and 1813 he was M.P. for Plympton Earls, and carried through parliament a bill against embezzlement by bankers of securities under their charge, which became law (52 Geo. III. c. 63). With his wife he started in June 1817 on a pilgrimage to Palestine, but on passing through Geneva he stopped to contend with

the consistory on ecclesiastical discipline. In 1825 he founded the professorship[1] of economy at Oxford. He was an apostle, evangelist, and prophet of the Irvingite Church, and built a church for that community at Albury, where he lived. From 1847 to his death he was M.P. for West Surrey. He was a frequent speaker in the House of Commons. Sir Henry Holland speaks of "the genial temperament and masculine, though eccentric intellect of Henry Drummond . . . who could not tread along the highway of common opinion either in religion or politics, but his aberrant path was always pursued with honesty as well as vigour" (*Recollections*, 1872, p. 156). Some of Drummond's numerous speeches and pamphlets were collected by Lord Lovaine, 1860, 2 vols. 8vo. His economical publications are:

Elementary Propositions on the Currency, London, 1819, 8vo (reprinted with additions in 1826, again in 1848, and with *Speeches*, etc., 1860, vol. ii.).—*Cheap Corn best for Farmers*, London, 1826, 8vo (anonymous: the landlords are the only gainers by the tax, all others, including the farmers, suffer).—*Justice to Corn Growers and to Corn Eaters*, London, 1839, 8vo (in favour of repeal with restrictions).—*Causes which lead to a Bank Restriction Bill*, London, 1839, 8vo ("the Bank of England is the only body which ought to have the power of issuing paper money," p. 20).—*On the Corn Laws*, London, 1841, 8vo.—*On the Condition of the Agricultural Classes of Great Britain and Ireland, with extracts from the Parliamentary Reports and Evidence from 1833 to 1840, and remarks by the French editor published at Vienna*, London, 1842, 2 vols. 8vo (with preface by Drummond; translation of two volumes published by the Austrian government to show "the folly of supposing that it is commerce and manufactures rather than agriculture which constitute the true wealth of this country," pref. xi.-xii.).—*Letter to the Bishop of Winchester on Free Trade*, London, 1846.—*Speech on Motion on Public Expenditure*, London, 1849.—*Letter to the Working Classes in Trades and Manufactures*, London, 1859 (on the bad treatment received by them "from manufacturers, millowners, and poor-law guardians, and of the exertions made by noblemen and gentlemen to protect" them—p. 29).

[Lord Lovaine, *Memoir*, 1860.—Oliphant, *Life of Edw. Irving*, 1862.—*Dict. of National Biography*, xvi. pp. 28, 29.—*Historical Register of the University of Oxford*, 1888, pp. 67, 68.] H. R. T.

DRUNKARDS, LEGISLATION RESPECTING. The care and the cure of habitual drunkards has of recent years, received more attention on the part of social reformers than formerly. A series of Acts dealing with habitual drunkards, both non-criminal and criminal, have been passed between 1879 and 1908. Habitual drunkards are defined as persons who through continued excessive drinking of intoxicating liquor are dangerous either to themselves or others, or incapable of managing their affairs.

Where a person is convicted of cruelty or certain other offences against a child or young person, and is the parent, or is living with the parent thereof, and is an habitual drunkard, he or she, instead of being sent to prison, may be ordered to be detained in a retreat for not more than two years, but the court must have regard to any objections raised by the wife or husband and be satisfied that reasonable provision will be made for defraying the expenses of detention (Children Act 1908, c. 67, § 12 (8)).

The Licensing Act of 1902 prohibits the sale of liquor to persons known to be drunkards and gives a wife the right to a separation order.

Retreats are, in England, licensed by the county or borough council of the district in which they are situate, and are under the control of the Home Secretary and an Inspector of Retreats. Application for admission to a retreat, stating the length of time the applicant undertakes to remain there, must be accompanied by the declaration of two persons that he is an habitual drunkard. The declaration must be made before a justice of the peace, who must satisfy himself that it is in accordance with facts and the intention of the applicant. The maximum time of detention is two years, but a case may be readmitted. The patient cannot leave before the expiration of the agreed time, unless he is previously discharged or allowed to go out on leave under provisions similar to those laid down in the Lunacy Act.

Besides licensed retreats the law provides for certified and for state reformatories in which persons convicted of crime committed while under the influence of drink may be detained under the Inebriates Act of 1898, and cases convicted of being drunk in any public place four times within a year may also be committed to these reformatories. In 1913 there were 17 licensed retreats with about 500 voluntary patients, and 6 certified inebriate reformatories, the number of committals in that year being 310, and in the fourteen years 1899-1913, 4590 (inclusive of the two state reformatories). At the end of 1913 there were 80 inmates in the latter and 722 in the former. These statistics refer to England and appear to be the last issued to the public.

Some interesting statistics were published in 1923 relating to the Dalrymple House at Rickmansworth. The following facts as to the family history of 1645 persons discharged from that retreat are stated:—Insanity in family with or

[1] Drummond charged his estate with a yearly rent of £100 for the endowment. The commissioners of 1877 increased the emoluments to £300 from the revenues of All Souls, besides £200 attached to a fellowship of the college The professorship is for five years, but holders of the office may now be re-elected. The following have been the professors: 1825, Nassau W. Senior; 1830, Richard Whateley; 1832, W. F. Lloyd; 1837, Herman Merivale; 1842, Travers Twiss; 1847, N. W. Senior (second time); 1852, G. K. Rickards; 1857, C. Neate; 1862, J. E. Thorold Rogers; 1868, Bonamy Price (again in 1873, 1878, and 1883); 1888, J. E. T. Rogers (second time) 1891, F. Y. Edgeworth.

without inebriety, about 11 per cent. Inebriety alone in about 50 per cent. Of the whole number 1419 left through expiration of time, and of these about 40 per cent are reported as doing well; 6 per cent improved and 22 per cent not improved. Sociability is named as the exciting cause in about 50 per cent of the cases; 380 had no occupation.

The twentieth report of the Inebriates Reformation and After-care Association, 117 Victoria Street, London, S.W.1, shows that from 1901 to 1923 the Society befriended 444 men and 776 women, of whom only twelve are classed as "unsatisfactory" and 29 as satisfactory, while 1018 were lost sight of after four years' supervision. No committals are now made to inebriate reformatories since the local authorities under the lead of the London County Council ceased their contributions. There are now only voluntary retreats, of which a list may be obtained from the above association or the Friends' Temperance Union, 15 Devonshire Street, E.C.2, or by reference to the Medical Directory and the Medical Annual.

The property of inebriates is now protected in the same way as that of lunatics under the Lunacy Act 1890 (§ 116), and the Lunacy Act 1891, § 27 (4), but it is doubtful if any use is made of these provisions.

The law relating to drunkenness in Germany, Austria, France, some of our colonies and elsewhere, provides that a dipsomaniac who exposes himself or his family to the risk of impoverishment, or who imperils the security of any other person, may be placed under guardianship.

E. S.; W. A. B.

[The Society for the Study of Inebriety, 19 Park Crescent, Portland Place, W.1, publishes *The British Journal of Inebriety* quarterly; T. N. Kelynack, *The Drink Problem of To-day*, 1916; R. Holmes, *Them that Fall*, 1923; A. Shadwell, *Drink, Temperance, and Legislation*, 1902; S. Freeman, *Guide to Stat. Law against Drunkenness in England*, 1906; H. N. Barnett, *Legal Responsibility of the Drunkard*, 1908; *Annual Reports* of Inspector under Inebriates Act. For other countries, see Parl. Paper (1902), cd. 1474.]

DRY EXCHANGE (*Cambium siccum*). A euphemism applied to the "coverture" or "colouring" of the stringent statutes passed during the Tudor period against usury. "A *cleanly* term invented for the disguising of foul usury, in which something is pretended to pass on both sides whereas in truth nothing passes but only on the one side" (Cowel). Usury, which was condemned by religion and law alike during the middle ages, was from the middle of the 16th century no longer to be confounded with the legitimate employment of capital; but the sentiment which inspired the above enactments was that of governing classes associated with the landed interest.

[Cunningham, *Growth of English Industry and Commerce*, 1890, 495 *et seq.*—Hall, *Elizabethan Society*, ch. iv.] H. Ha.

DRY RENT (*Rent sec*). An annual rent-charge reserved upon lands conveyed by deed, without the insertion of a clause of distraint.

H. Ha.

DUBOS, Abbé J. B. (1670-1742), a member of the French Academy, and author of historical works and of a treatise on poetry and painting.

The one book of his which requires notice here is entitled *Les Interests de l'Angleterre mal entendus dans la guerre présente* (Amsterdam, 1703), and professes to be a translation from an English book. Speaking thus as an Englishman, the Abbé remonstrates against the war policy of the English administration. He is well acquainted with contemporary English pamphlets on the Tory side, especially with Davenant, whom he often quotes. He successively examines the effect of war on each branch of English trade and manufactures, and distinctly states (p. 80) that "the attempts we (the English) shall be obliged to make in order to enforce in the (American) colonies the just obedience they owe to the state which has founded them, will perhaps lead them to rebellion, when they will have learned that they can do without us."

Voltaire addresses him in a letter dated 30th October 1738, as "the most useful and judicious writer he knows," but, when writing to other people, he indulges in sarcasm about the Abbé's "mistaken" notions as to the interest of England. E. Ca.

DUCAT, History of. A gold coin (worth about 9s. 4½d.) in extensive use on the continent till this century, and adopted by successive emperors as the standard coin of the empire in the middle ages. The coin first makes its appearance in 1140 A.D., when Roger II., King of Sicily and Duke of Apulia and Calabria, issued silver coins to which he gave the name "ducati," probably because they were first struck in the duchy of Apulia, especially called "il ducato," and bore, in an abbreviated form, the inscription—"Sit tibi, Christe, datus, quem tu regis, iste Ducatus" (Let this Duchy, O Christ, which thou rulest, be dedicated to thee). The coin then spread through Italy until, in 1252, it was formally adopted at Florence, and gold pieces were issued under the name of "ducati gigliati." These ducati gigliati, or florens d'or, as they were called elsewhere, were 24 carats fine, and 64 to the fine mark. Thirty-two years later, by a law passed in 1283 A.D., ducats were struck at Venice by the Doge John Dandolo, the second of the four celebrated Doges Dandolo, 67 to the fine mark, and each bearing the inscription of the original ducat of Apulia. In the 16th century, these ducats received the name of "zecchini" (sequins) from Zecca, the Venetian

mint, whence their Anglo-Indian name of "chicks" (Rs. 4).

By the beginning of the 14th century these florens d'or and Venetian ducats had spread throughout the states of Italy, and especially the Church states, where Florentine ducats were universally adopted and issued as "novelli ducati papales," with only slight variations from the original standard of 1252. The Florentine coin thence spread into Hungary, whither it was followed by the Venetian ducat, until in 1365, Venetian ducats were struck by the king Ludwig, at Kremnitz, of 23¾ carats fine, and 67$\frac{7}{10}$ to the Cologne mark. Later on "imperial" ducats were issued at 23½ carats fine, and 68$\frac{7}{10}$ to the fine mark. From Hungary and Bohemia the Venetian ducat, preceded however by the floren d'or, was introduced into Germany, and continued to circulate as a foreign coin throughout its various states, right up to the Augsburg Convention of 1559. In this year the imperial diet of Germany adopted the ducat into the currency of the empire (Ferdinand I.) at a prescribed "dukaten-fuss" of 23⅞ carats fineness, and 67 to the Cologne mark (and therefore 67$\frac{8}{11}$ to the fine mark)—a "footing" subsequently maintained both by the Leipzig Convention of 1690, by the Austro-Bavarian Convention of 1753, and the Frankfurt Coinage Union of 1765.

This adoption of the ducat into the currency of the empire had the effect of causing the surrounding states to follow the lead of striking ducats for themselves. Yet in every case, though both the floren d'or and the Venetian ducat (by this time known as the sequin) had previously obtained in circulation, it was the latter coin that was adopted and struck as the standard of currency by the several states; by the cantons of Switzerland in the 16th and early 17th centuries, at fineness and weights varying from 23½ carats and 68$\frac{7}{10}$ ducats to the fine mark, at Berne, to 23⅝ carats and 67$\frac{9}{10}$ respectively, at Basel and St. Gallen; by Denmark in 1647 at 23½ carats fine, and 68$\frac{7}{10}$ ducats to the fine mark; by Holland, a little later, at 23$\frac{7}{10}$ carats fine, and 68⅛ to the fine mark; by Russia, Poland, and Sweden, about the same time, or a little earlier, at rates varying from 23½ carats fine to 23¾, and 78 to 68$\frac{7}{10}$ ducats to the fine mark, and continued to be coined till well into the 19th century. Ducats were even struck by the Porte, and some issued by Sultan Mahomet IV. are known (1649-1693 A.D.). A Barbary ducat was current in the West Indies early in the 18th century.

The history of the ducat in France, Spain, and Portugal is slightly different. As regards the latter country, Pope Calistus III. having in 1455 demanded supplies for an expedition against the Turks, Alphonso V., then king, had quarter-ducats, or "Crusados" struck in 1455, first at 23 carats fineness; later at 22 carats fine and 289⅛ of these crusados to the fine mark. These Crusados or Portuguese quarter-ducats are the "Kreuz-dukaten" of the German middle ages. Still later (1722-1750), new crusados were issued at the same fineness as before, but at an increased weight, viz. 237 to the fine mark. In France, where the ducat was early introduced, the Florentine coin (64 to the fine mark) was adopted over its elsewhere successful rival, thanks to the fact that at this time (14th century) the Pope resided at Avignon; while in Spain in 1537, under Emperor Charles V., the Italian and French ducat, under the name of the "escudo" (22 carats fine, and 68 to the Castilian mark = 69⅛ nearly to the fine Cologne mark) began and long continued to form the basis of the Spanish gold monetary system (see DOUBLOON).

By far the most common "ducats" were those current in Hungary, Germany, Holland, and Russia, and averaged in value, each containing roughly 53·9 grains, about 9s. 4½d. apiece. The Swedish ducat, however, was only worth about 9s. 3½d., while the modern Italian gold ducat was much less. Silver ducats were also struck in several places, and varied in value much more than the gold; *e.g.* the silver ducats of Italy were worth 3s. 4d.; those of Holland (the daalders) 4s. 2d.; while the silver ducat of Sicily had the value of 3s. 4½d. Ducats were also issued made of platinum (Russia), and earlier of copper and lead (Venice, Germany, France, and Holland), while they were not infrequently struck as medallions.

[Vergara, *Monete del Regno di Napoli*, Roma, 1715.—Philippi Argelati, *De Monetis Italiæ*, 5 vols., Mediolani, 1750.—Johann Tobias Köhler, *Vollständiges Ducaten-Cabinet*, 2 vols., Hanover, 1760.—Bonneville, *Traité des Monnaies*, Paris, 1806]. W. L.

DUCAT (*Modern*). Austrian standard gold coin, weight 53·86 grains, fineness 986. Value; English standard (916·6 fine at £3 : 17 : 10½ per oz.) 9s. 4¾d.; French standard (900 fine) 11·85 francs.

Ducats were the principal medium of exchange in Italy for several centuries. (See DUCAT, HISTORY OF.) F. E. A.

DUCHATEL, Comte TANNEGUY, born at Paris in 1803, died in 1867. He was on several occasions a minister of state and organised the commission of inquiry which resulted in the law of 24th May 1834. This replaced a large number of prohibitions on imports by customs duties (the report of this inquiry has been published in 3 vols. 8vo). In 1829 he published a work entitled *De la charité dans ses rapports avec l'état moral et le bien-être des classes inférieures de la société*, 1 vol. in 4to. This was reprinted in 1836 without any change except that of the title, which became *Considérations*

d'économie politique sur la bienfaisance ou de la charité, etc., 1 vol. in 8vo. Blanqui reproaches him with too unqualified an acceptance of the doctrines of Malthus; but this should rather be reckoned as a point in his favour. He was received in 1846 into the *Académie des Sciences morales et politiques*. His claims to be a descendant of the *Tanneguy du Chatel* of the 15th century appear to be unfounded. A. C. f.

DUCPETIAUX, EDOUARD, born in Brussels in 1804, died 1868. In 1828 he published several pamphlets on *Repressive and Provident Justice*, and on the penalty of death. Shortly after the revolution of 1830 he was appointed general inspector of the Penitentiary and Beneficent Institutions of the new-born kingdom. Ducpétiaux was a prolific and indefatigable writer on the subjects which had from the beginning of his life attracted his attention. His principal works on the punishment of criminals are: *Progrès et État de la Réforme Pénitentiaire* (1838), and *Des Conditions de l'Emprisonnement séparé ou cellulaire* (1857), in which he shows himself a consistent advocate of the cellular system as being the punishment best adapted to awaken a sense of morality in the prisoner, by the predominance of the principle of amendment over the principle of pure repression. He was no less devoted to the solution of the problems connected with the condition of the working classes. In connection with this we may mention his *Condition Physique et Morale des Jeunes Ouvriers* (1843), his *Paupérisme en Belgique* (1844), his *Mémoire sur le Paupérisme dans les Flandres* (1850), which obtained a prize from the Royal Academy of Belgium, and his important *Budgets Économiques des Classes Ouvrières en Belgique* (1855). All his works were published in Brussels.

His book on the condition of young operatives is a very full inquiry into their state and the legislation on this matter in the principal countries of Europe and in the United States; but his two essays on pauperism in Belgium are the most likely to interest the English reader. The former is rather too rhetorical, but the second gives a very graphic account, based on statistics and exhaustive personal investigations, of the miserable state of the population of Flanders after the decay of the weaving by hand of flax and linen. In 1848 in the two provinces of East and West Flanders the average wages of the adult male weaver had fallen to 6d. a day, the number of deaths exceeded the number of births by 4541 (20,715 against 16,174) and about one-third (453,658) of the population of Flanders had to be assisted by state charity. Ducpetiaux ascribed this miserable situation to an excess of population, and to an excessive prevalence of *laissez-faire*. He called upon the state to interfere by fostering the spirit of association, popular education, emigration, and securing labour to adult and able-bodied paupers. Notwithstanding his appeal to the state, he is no friend to the English poor system, which he calls a devouring cancer (p. 272). He is not an antagonist of the factory system, and vigorously asserts that mechanical work is only degrading because it is too protracted (*Condition des Jeunes Ouvriers*, ii. p. 6).

Ducpetiaux also promoted charitable congresses in Belgium. Towards the end of his life he changed political sides, passing from the liberal into the clerical party, but he remained to the last a steadfast adherent of Malthus's views on moral restraint, which were considered by his new political allies as having a tendency to immorality. E. Ca.

DUE (*gerihta*, *rectitudo*, *rectum*). That which is owing to the crown or to any corporate body or to any individual subject by prescription or charter. There is this distinction to be made between a "due" and a "custom" that the former is warranted by the common law, being usually levied by virtue of written laws and contracts which are as ancient as the common law itself, while the latter, in its first origin at least, was a more or less uncertain and unauthorised impost, so that we find the term "recta" and "mala" applied to the respective forms of the custom which were authorised by statute or contract, or else levied at the will of the king or other lord alone.

Again, a "due" for the most part seems to arise from the ownership or cultivation of the soil itself, and therefore it is perhaps the most primitive form of tax; whereas a "custom" for the most part seems to arise from the exchange or conversion of the products of the soil by way of merchandise. The most typical due of any, CHURCH-SEED (*q.v.*), is certainly more than a century older than any other customary contribution. Several kinds of dues may be enumerated, as ecclesiastical, seignorial, municipal, and fiscal or regal. Of these ecclesiastical dues are of very great antiquity, for those that are still familiar to us in the present day as tithes (see TITHES) and church-rates can be traced back to the English laws of the 8th century, although many others which were paid to the early church have long since disappeared. A still greater antiquity could even be claimed for them in this country by reference to the doctrinal writings of the 7th century, and the analogy of Frankish customs.

The well-known compact between the Anglo-Saxon sovereignty and the church in virtue of which the king's dignity and the archbishop's were respectively maintained, and the peace of the crown and church went hand in hand, is further exemplified by the arrangements enforced by the state for the temporal welfare of the holy order. Anglo-Saxon finance is no intricate problem, simply because whilst the king lived of his own, the working expenses of government were amply met by the threefold

allodial obligation. But in contrast to their reticence on the subject of lay taxation, the Saxon laws are replete with the most elaborate directions for the payment of ecclesiastical dues. "We enjoin to every Christian man by virtue of his Christendom," is the refrain of these laws, "that he pay tithe and church-scot and Rome-scot, and plough-alms, and light-scot and soul-scot." These injunctions are found equally in secular and ecclesiastical *dooms*, and they take the place of honour in the proceedings of great councils like that of Greatanlea. Under the later Saxon kings the injunction of the pious sovereign becomes far more stringent until it is stereotyped in the precise legal definitions given in the Latinised version of the 12th century jurists, so that at length in the "laws of Henry I." we find tithe and church-scot and other dues embraced under the general heading *De placitis Ecclesiæ pertinentibus ad Regem*.

It is true that in Anglo-Saxon times the dues of the church were put in charge for the crown by means of a heavy fine for non-compliance or even by absolute distraint in which the king's reeve was required to assist the bishop's officer and the local incumbent; and we also find the doctrine prevailing that if the occupier were too poor to pay, the lord should pay for him.

It is possible that the rigour of this system of assessment and collection of church dues was somewhat mitigated by the reflection that these were eventually offerings made to God, a theory carefully fostered both by the crown and the church, so that the term God's dues (*godcunde gerihta* or *Dei rectitudines*) is actually synonymous with church-dues during the latter part of the Anglo-Saxon period at least, and thus perhaps the sentence of excommunication decreed by King Edmund's laws on all defaulters was justified. On the other hand, the refusal to pay Peter's pence was a contempt which led to the appearance of the offender before the court of Rome itself to make atonement. In addition to the above persistent injunctions, these early laws provided further for the payment of church dues to be made at fixed and appropriate seasons. Thus tithes became due always as the plough entered the tenth field, or more probably in actual practice, plough-alms were rendered at Easter, tithes of cattle at Pentecost, the fruits of the earth at All-hallowtide, and church-seed at Martinmas; the tenth cheese as it was made, or the milk drawn on the tenth day. In the same way Rome-scot was payable on St. Peter's feast-day; and light-scot at Candlemas, Easter Eve, and All-hallows Eve. Finally, in order to mark the precision with which these dispositions were made, we find provision for the payment of soul-scot at the open grave, wherever the death might take place.

The statistics available for the purpose of estimating the nature and extent of these contributions are unfortunately not nearly so abundant as these details of the means for insuring their payment, or at least they are not so authentic for the earlier period. It may easily be gathered, however, that the unit of assessment was the plough and the normal sum assessed on every plough the penny. In fact the Anglo-Saxon SCAET like the Anglo-Norman Denarius, was the synonym of money, while the medium of exchange in both periods might be equally treasure in kind or in currency. Add to this primitive basis of calculation the further connection between the plough and the hearth as representing the stake of one family in the soil, and it will be possible to account for nearly every ecclesiastical assessment that fell upon the husbandman free or unfree. Moreover, *denarius* might be, and does indeed appear to have been, used in its original meaning of a tenth part (see DENIER). Thus the thane is required to render a tenth of all that he has; a tithe which, reduced to terms of money according to the normal assessment of the hide, would be found equivalent to a tenth penny. The church-scot was originally a measure of corn that was probably equivalent to a tenth part of the produce of the normal virgate holding, and equally it was assessed upon every hearthstead at which the tiller was found seated in the midwinter before it fell due. So the plough-scot and Rome-scot were expressed in convertible terms of the hearth, the plough, or the penny. The light-scot was always a money payment of a halfpenny on every hide of land because candles were imported from the continent, but if wax were not available, other produce of the soil such as cattle was certainly rendered in kind, *pecunia* and *denarius* being once more convertible terms.

Although no secular institution was endowed with an oblatory revenue as ancient or as extensive as that arising from the dues of the church, it is perhaps possible to trace a certain analogy between the ecclesiastical and municipal corporations herein. Pious sovereigns who had invested the church by virtue of binding ordinances with the power of levying dues upon all products of the soil within the parochial "ministery," were succeeded in direct line of descent and policy by others who invested the towns one by one with a like implied privilege by the terms of royal charters. The one body held by free alms, the other by the *firma burgi*. The latter stood in need of contributions for the repair of streets or quays and general administrative purposes, the former distrained upon its flock on the plea that churches must be repaired, the poor relieved, and the clergy themselves housed and fed. Whatever the value of this analogy may be, it is certain that the dues legally raised for purposes of municipal self-government, pontage,

murage, pavage, quayage, moreage, towage, terrage, strandage, cranage, mesonage, anchorage, keelage, bushelage, lestage, ballastage, measurage, average, primage, and the like afford by far the best-known, the most enduring, and the most regular examples of dues. Indeed it might be thought that the still more historic contributions known as gable tax, tallage, and the like, would fall under the head of dues in a system of common assessment for self-taxation, but here as elsewhere we must sharply distinguish between rent and taxation on the one hand, and between imperial or parliamentary taxation and customary dues on the other.

This necessary distinction brings our inquiry within still narrower limits in the case of seignorial or manorial dues, as well as those that were levied by the king as lord paramount of the whole realm. Extents, court rolls, and ministers' accounts, together with surveys, such as Domesday Book, the Boldon Book, and the Hundred Rolls, present us with an infinite variety of payments in the nature of commuted rents and pecuniary mulcts, the legal definitions of which are set forth in the various *Expositiones Vocabulorum* appended to most of the fiscal registers of the 13th and 14th centuries, but none of these can properly be regarded as dues. Some such there are, however, but their existence was from the first anomalous, and they are chiefly remembered in the present day amongst the curiosities of manorial tenures. In certain cases, however, an inland town or seaport might continue for centuries under the jurisdiction of a lord who enjoyed the tolls and other dues, just as a layman might appropriate the dues intended for the support of the church, and in such cases the seignorial interest takes the place of the ecclesiastical or municipal or fiscal.

The dues or "rights" of the crown *qud* lord paramount of the whole land must be carefully distinguished from the normal sources of imperial revenue on the one hand and from the customary revenue by prerogative or grant of parliament on the other hand. What remained were the seignorial dues received by the sovereign from the manors and farms composing his demesne, and from escheats and vacant churches, together with certain other rights appertaining to his kingly state alone. Even in the most primitive state of kingship the tribal ruler appears to have received a contribution from the products of the soil, the tradition of which still lingered in the *mises* and *prises* of the 13th century. That is to say, the king took toll of certain staple products to maintain the rude splendour which was as essential to a civil state of society as the ceremonies and "ministery" of the church. As far as we are at present enabled to distinguish between a recognised rent or custom and a specific due, it seems probable that the several forms of purveyance were of the latter nature, together with those tolls or perquisites which are peculiar to the fiscal period that precedes the development of parliamentary supply. Such an assessment as the avalage is probably of this nature (Madox, i. 775). On the other hand, many more, which are popularly regarded as dues, are really in the nature of rent, such as the *firma unius noctis* of Domesday Book and the *gafol* or *gablum* (Round, *Domes. Studies*, vol. i.)

A considerable revenue was certainly obtained from the end of the 12th to the close of the 13th century by way of dues upon merchandise at the outports and inland barriers, which can scarcely be included under the head of customs. Thus in addition to the general exactions alluded to in several public charters, we have notices of a disme and quindisme levied as early as the reign of Richard I., chiefly, no doubt, upon foreign imports (Pipe Roll, 10 Ric. 1 m. 12b). These and other dues appear to have been more or less consolidated under the administration of the royal chamberlains at London and Southampton. The exactions of the king's officers at the Tower of London, forbidden in several of the city charters, were clearly of the same nature. It is interesting to note, moreover, the inclusion of the profits or droits arising from the sale of prizes of war and contraband goods amongst the chamberlains' accounts; these, like deodands, forming a link between the casual and the customary revenue of the crown.

With the statutory recognition and limitation of the ancient dues of the crown in respect of the products of the soil exported under the distinctive term of *Recta custuma* and the corresponding definition of the dues formerly payable at discretion upon imports, such as wines by the name of *Recta prisa*, their history may be said to belong thenceforth to that of the customs revenue. *Prises* and *mises* are for the future associated with the unconstitutional abuses of purveyance, together with *caption* and *emption*, and other relics of the old tribal state. Certain other dues continued to be levied in the king's name, such as the penny (*denier* or *devoir* once more), by the gauger of wines and the aulnager of cloths, and even the Calais dues themselves (see DENIERS DE CALAIS); but these, like the god's-penny, and the cocket, and tronage dues, are properly to be regarded as official fees or *perquisites*, outside the customary revenue it is true, and yet not included in the revenue returns for fiscal purposes. It was by such dues as these, sanctioned by the authority of the crown, and even put in charge for the crown, that the royal ministers, from the smelter of the exchequer to the treasurer of England, eked out their scanty fees *in gremio scaccarii* itself.

H. Ha.

DUE DATE (Bill of Exchange). This is the date at which the holder of a bill of exchange may claim payment from the drawee. The following rules, as to the way of ascertaining that date, are applicable in the case of bills payable within the United Kingdom. A bill is payable on demand: (*a*) if it is expressed to be payable on demand, or at sight, or on presentation; (*b*) if no time for payment is expressed (Bill of Exchange Act, § 10). The due date of a bill, not payable on demand, is found by adding three days (which are called the days of grace) to the time of payment named in the bill, but this rule is subject to the following exceptions: (*a*) when the last day of grace is a bank holiday, or a Sunday immediately following a bank holiday, the bill is payable on the *succeeding* business day (*e.g.* if a bill is drawn payable on the 23rd December in a year when the 26th of December falls on a Saturday, the due date would be the 28th December); (*b*) when the last day of grace is Good Friday, Christmas Day, or a Sunday (not immediately following a bank holiday), the due date falls on the preceding business day (thus, in a year in which Christmas Day falls on a Friday, a bill, drawn payable on the 22nd December is due on the 24th, whereas in the same year, a bill drawn payable on the 23rd, as shown above, is due on the 28th only). Where a bill is payable at a fixed period after sight the time begins to run from the date of acceptance, or in the case of an unaccepted bill from the date of noting or protesting (Bill of Exchange Act, § 14 [3]). On the continent a bill is sometimes stated to be payable after usance (or after two or more usances), the usance being either a fixed time, or a time varying according to the distance of the place of issue from the place of payment. In France the duration of a usance is thirty days, the time being computed from the day *following* the date of the bill (Code de Commerce, § 132); the German and Italian codes do not recognise this mode of fixing the due date. In all continental countries a recognised practice exists of making bills payable at some named fair or market ("Messwechsel" or "Marktwechsel"—German Code, §§ 4, 18, 35; "payable en foire"—French Code de Commerce, §§ 129 and 133; "pagabile in fiera"—Italian Codice di Commercio, §§ 252 and 286). If the fair or market extends over a day, such bills are payable on the day preceding the last day of the fair or market. The importance of those assemblages having much decreased of late years, bills bearing such indications are becoming scarce. E. S.

DUFAU, F. P., born in 1795, was the director of the Institute for the Blind in Paris, and wrote several works on the subject of their proper treatment. In 1840 he published a volume entitled *Traité de Statistique ou théorie de l'étude des lois d'après lesquelles se développent les faits sociaux, suivi d'un Essai sur la statistique physique et morale de la population française.* In the theoretical part he does not approve of the adoption of coloured statistical maps, as being "only able to convey vague and indistinct notions to the mind." In the second part, he intended to apply the rules set down by himself to the study of the population, territory, and state in France; but declares that, owing to the want of sufficient materials, he has been obliged to give up the two last divisions of his investigations. This work received, in 1841, a prize from the Academy of Sciences in Paris. In 1847, under the title of *Lettres à une Dame de Charité*, he gave a complete description of the institutions and associations for the alleviation of the sufferings of the poor. E. Ca.

DUHAMEL DU MONCEAU, Henri Louis (1700-1781) was inspector general of the navy, member of several learned societies, and author of numerous treatises on manufactures, forestry, and agriculture; the principal of which are his *Traité de la conservation des Grains* (1753); *École d'Agriculture* (1759); *Eléments d'Agriculture* (which went through several editions from 1754 to 1779); and the *Traité de la Culture des Terres* (1753-1761), written—at least the last—to advocate in France the methods of cultivation originated in England by Jethro Tull. He is mentioned as a distinguished agriculturist by Voltaire in his *Précis du Siècle de Louis XV.* (ch. xliii.) and in his *Lettre à l'Homme aux Quarante Écus*, although in the latter with some mockery on the pecuniary results of his experiments. A. Young calls him a "useful genius" (*Travels in France*, 1792, i. 55).

In 1764 Duhamel printed a small pamphlet of only fifteen pages (*Réflexions sur la Police des Grains*), in which he asserts that, in order to keep agriculture in a healthy condition, the price of corn must not fall below a price sufficient to meet the necessary expenses of the farmer, nor be carried too high, so as to cause famines, which grind the poor and the artisans. The natural regulations of a good policy would be (1) to allow an entirely free inland trade of corn; (2) to suppress all tolls on the inland carriage of corn, either by land or by water; (3) to allow every citizen to store corn until a time of dearth; (4) to grant free export, without any privilege of person, when the storehouses are full and the crops continue to be abundant.

Duhamel ends by distinctly denying that France ought to follow the example of England, there being a great difference in many respects between the conditions of the two countries. E. Ca.

DUMOULIN. See Molinaeus.

DUNCAN, Henry, D.D. (1774-1846), a minister distinguished for his philanthropic labours and practical sagacity, is best remembered as the founder of savings banks. It is

true that he was neither the first to suggest the formation of such banks nor the first to establish them. Such banks existed on the Continent, in England, and even in Scotland, before Dr. Duncan founded the "parent institution" at Ruthwell in 1810. But the name of Dr. Duncan is as justly connected with savings banks as those of Cobden and Bright with Free Trade; he did for the one movement what they did for the other.

The attention of Dr. Duncan had been early drawn to the condition of the poor, and he thought and read much on the subject. One day there came into his hands a pamphlet bearing the title *Tranquillity*, the author of which, Mr. John Bone, propounded a scheme for the gradual abolition of poor-rates in England. A subordinate feature of this scheme was the "erection of an economical bank for the savings of the industrious." The suggestion germinated rapidly in the mind of Dr. Duncan. He saw in it the means of elevating the condition of the labouring classes and of preventing the introduction of a compulsory poor-rate, a measure which he regarded as certain to injure the community. The result of his study and efforts was the establishment in his own parish of a bank for savings, and the publication of its rules (Rules and Regulations of the Parish Bank Friendly Society of Ruthwell, instituted 26th May 1810). The rules set forth clearly and plainly the nature and advantages of the scheme, the system of management, the provision for deposits and withdrawals. The latter were in certain defined cases subject to the judgment of the managing body. The experiment at Ruthwell, though made in a parish of only 1100 people, purely agricultural, without resident heritors, and where the majority of those grown up were already members of friendly societies, was most encouraging. From the first Dr. Duncan intended that his scheme should be adopted everywhere, and by tongue and pen he spread the knowledge of what was being done in his parish. In 1814-15 the movement attracted a large measure of public notice and advanced rapidly. The table of Dr. Duncan was heaped with letters of inquiry; and to save his time, and to promote the cause he had at heart, he published in 1815 an *Essay on the Nature and Advantages of Parish Banks*, a greatly enlarged edition of which appeared in the following year. The essay is in four sections. The first discusses, with candour and breadth of mind, the objects and principles of savings banks; the second relates their history so far as known to the author, who speaks of his own labours with singular modesty; the third advocates co-operation between savings banks and friendly societies; the fourth, consisting of miscellaneous remarks, deals vigorously with the morality of saving and the question of a poor-law. In 1817 Dr. Duncan was forced to take the field against Mr. J. H. Forbes, the future judge Lord Medwyn, who had denied that the Ruthwell bank was the "parent institution," claiming that distinction for Edinburgh, and who had exalted the management of the Edinburgh bank at the expense of that of Ruthwell. He showed without passion, and with dignity and courtesy, that both these assertions were erroneous (*Letter to J. H. Forbes, Esq.*). This same year a measure was framed by Mr. Rose in the interests of savings banks, but its provisions, while highly beneficial to depositors in England and Ireland, were disadvantageous to those in Scotland. Dr. Duncan convinced Mr. Rose that this was the case, and Scotland was not included within the scope of the act. Two years later, a bill adapted to the peculiar circumstances of Scotland, drafted by Dr. Duncan, and expounded and defended by him in Scotland and London, passed both Houses. The vindication of the measure is contained in his *Letter to W. R. K. Douglas, Esq., M.P., on the expediency of the Bill brought by him into Parliament for the protection and encouragement of Savings Banks in Scotland.* A *Letter to Managers of Banks for Saving in Scotland*, 1819, informed them of the steps they needed to take in order to take advantage of the act. In 1824 the Scotch banks were forced to reduce the interest of 5 per cent which they had hitherto allowed on deposits from savings banks, and Dr. Duncan sought to procure for the savings banks of Scotland the right to purchase, if they saw fit, those government debentures the acquisition of which was made compulsory, by the act of 1817, on savings banks in England and Ireland. But the treasury refused to treat Scotland exceptionally. In 1835 a measure was passed, with Dr. Duncan's hearty approval, making the regulations for savings banks uniform in the three kingdoms, but at the same time conceding to Scotch banks established before the date of the act the privilege which Dr. Duncan had advocated in 1824.

It should be added that Dr. Duncan was a free trader, and that he published in 1820 a letter to Mr. Douglas, M.P., in which he contended for the abolition of all commercial restrictions. In 1830 he published *Presbyter's Letters* on the West Indian question, in which, with his usual sobriety of statement and calmness of judgment, he argued against immediate and unconditional emancipation, and in favour of emancipation at a fixed but not distant date—substantially the policy which three years later was adopted by parliament.

[Besides the pamphlets cited, see *Memoirs of the Rev. Henry Duncan, D.D.*, by the Rev. G. J. C. Duncan (Edinburgh, Wm. Oliphant and Son, 1848), and the article by Prof. Blaikie in the *Dict of Nat. Biog.*] W. P.

DUNCAN, JOHN, according to M'Culloch (*Literature of Political Economy*, 1845, p. 286) was the author of the following work, directed partly against indiscriminate almsgiving:—

Collections relative to systematic relief of the Poor at different Periods and in different Countries: with observations on Charity, its proper objects and its influence on the welfare of Nations, Bath, 1815, 8vo. H. R. T.

DUNCAN, JONATHAN (1799-1865) son of Jonathan Duncan, governor of Bombay, was born there, and died in London. He took his B.A. degree at Cambridge in 1821 and lived for some time in the Channel Islands. He edited the *Guernsey and Jersey Magazine* (1836-37) and published several historical works, original and translated. After 1841 he lived chiefly in London and devoted himself to currency reform, on which subject he wrote:

How to reconcile the rights of Property, Capital, and Labour—Tract I. of the Currency Reform Association, London, 1846, 8vo (all published; "money need not, and indeed ought not, to possess any intrinsic value" (p. 6), "value . . . is labour condensed" (p. 10)).—*The National Anti-Gold Law League; the principles of the League explained versus Sir R. Peel's currency measures, and the partial remedy advocated by the Scottish Banks*, London, 1847, 8vo.—*Letters on Monetary Science;* by Aladdin, London, 1848, 8vo (contributions signed by this pseudonym to Jerrold's *Weekly News*, written "to emancipate the human mind from the gross errors of bullionism and the servile idolatry of a comparatively useless metal").—*The Principles of Money demonstrated, and bullionist fallacies refuted*, London, 1849, sm. 8vo.—*The Journal of Industry*, 30th November 1850 to 15th March 1851, small folio (only sixteen numbers published; chiefly devoted to currency).—*The Bank Charter Act; ought the Bank of England or the People of England to receive the profits of the national circulation*, 2nd ed., London, 1858, 8vo.

[*Dict. of Nat. Biography*, xvi. 170, 171.] H. R. T.

DUNDAS, HENRY (1742-1811), first Viscount Melville, successively solicitor-general and lord advocate of Scotland, and thereafter a prominent member in different offices in several administrations, honoured with the friendship of Pitt, and for many years the dictator of Scotland, was regarded during his lifetime as a high authority on questions of trade and commerce, more especially in connection with the East Indies. From the formation of the board of control, he was in fact, though not in name, the minister for India. In 1793 he moved the renewal of the monopoly granted to the company. The speech he delivered on this occasion was afterwards published, having as a preface the eulogy pronounced on it by Pitt in the course of the subsequent debate (*Substance of the Speech of the Right Hon. Henry Dundas, on the British Government and Trade in the East Indies, 23rd April 1793, London, 1813*). From an economical point of view the most important statement in the speech is the declaration that the existing arrangement in India was "in opposition to established theories in government and commerce." The experience of nine years had however justified the system. The same views are expressed in his *Letters upon an Open Trade to India* (London 1813). He contends that the question cannot be treated as a purely commercial one and strenuously asserts that the trade to India should not be open.

[Stanhope's *Life of Pitt*.—Omand's *Lord Advocates of Scotland*, ii.—articles in *Dict. of Nat. Biog.* and *Ency. Brit.*] W. P.

DUNNING, RICHARD (fl. 1685-1698), published *A Plain and Easy Method, showing how the office of overseer of the poor may be managed, whereby it may be £9000 per annum advantage to the county of Devon, without abating the weekly relief of any Poor* (1685); and *Bread for the Poor*, by R. D. (1698). He defended the old poor law (43 Eliz. c. 2), which he maintained was sufficient to reduce poverty, and suggested various methods for its better administration. The chief value of Dunning's pamphlets consists in the information they contain relative to the condition of the labouring classes in Devonshire at the end of the 17th century.

[Eden's *State of the Poor* (1797), i. 225, 248-252.] W. A. S. H.

DUNOYER, CHARLES (1786-1862), born at Carennac (Lot), died at Paris. He studied law at Paris; then assisted in preparing the *Recueil de jurisprudence* of Sirey. He welcomed the fall of the empire, though he only accepted the legitimist monarchy so far as it respected the liberty of the people. In conjunction with Charles Comte he established, 12th June 1814, the journal entitled *Le Censeur*, but the *Terreur blanche* compelled them to discontinue the publication of this paper in 1816. They resumed it eighteen months later, but modified its title to *Le Censeur Européen*. The increasing severity of the press laws, however, seriously hampered them, and, finally, the assassination of the Duke of Berry, 13th February 1820, and consequent troubles led to the entire suspension of the paper. After this Comte and Dunoyer, notwithstanding the similarity of their political and economic opinions, were compelled to separate—the former went to Switzerland, while Dunoyer devoted himself exclusively to economics. He gave at Paris in the *Athenæum Institution* a course of lectures on political economy and moral science, which were afterwards published in a volume bearing the title of *L'industrie et la morale considérées dans leurs rapports avec la liberté*, in 8vo, 1825.

When the *Ordonnances* of the 26th July 1830

appeared, Dunoyer protested in writing against this breach of the charter of 1814. After this, despairing of the elder branch of the Bourbon family, he turned to Louis Philippe, whose accession to power he welcomed with enthusiasm. Appointed, shortly after the "three days," prefect of the department of the Allier, he was transferred in 1832 to the prefecture of the Somme; this he quitted in 1838 to enter the council of state. This last post was better suited to his disposition, which, though calm, was full of energy, and ill-adapted to the compromises and the half-measures which necessity requires of practical politicians.

In 1830 he reprinted his volume of 1825 with many additions, under the title of *Nouveau traité d'économie sociale*, etc., 2 vols., 1830, in 8vo; but just before the second volume was put into circulation a fire, in 1835, consumed nearly all the copies. Extending the scope of his work, Dunoyer republished it in 1845 under the title *De la liberté du travail ou simple exposé des conditions dans lesquelles les forces humaines s'exercent avec le plus de puissance*, 3 vols. in 8vo. Besides being the author of this masterly work, Dunoyer was a contributor successively to the *Revue Encyclopédique*, the *Revue française*, the *Journal des débats*, and the *Journal des économistes*. The revolution of 1848 was a heavy blow to him, royalist and liberal as he was in his political convictions; he remained, however, on the council of state, and only relinquished his seat there after the *coup d'état* of 1851. Bitterly hostile to the second empire, as he had been to the first, he wrote a work directed against the new order of affairs. This book, which was published after his death, and then only at Brussels, is entitled *Le second empire et une nouvelle restauration*, 2 vols., 1865, in 8vo. He was elected, in 1832, a member of the Institute (*Académie des Sciences morales et politiques*), and in 1845 president of the society of political economy. His miscellaneous works (*Notices d'économie sociale*), and the second edition of his book *La Liberté du travail*, were published, both at the same time, in 1886 (3 vols. in 8vo), through the filial care of his son Anatole Dunoyer.

Dunoyer was one of the great economists of the 19th century. He wrote with much force in support of the theory of "immaterial wealth," even going so far as to say that, from the economic point of view, no "wealth" could be other than "immaterial." He was a warm supporter of the theories of Malthus on population; but he was no believer in the theory of rent, considering that there was only one factor in production, *i.e.* labour. Firm and elevated in character, rigid in life and thought, even more severe towards himself than towards others, Dunoyer was one of those men whose career affords one of the highest examples. He died in the enjoyment of that esteem which his frank and loyal conduct won for him in every public position that he had occupied.

A. C. I.

DUODECIMAL SYSTEM. The following remarks under this rubric are given simply because, as we have devoted considerable room to the subject of the decimal system, it might be supposed that we had not fairly considered the relative merits of an alternative, or, as some may imagine, a superior system. But the fact is that there never has been, and undoubtedly never will be, any true duodecimal system in use by mankind in notation, calculation, weights, measures, or coin. The fundamental reason for this is that whilst the number of digits in the universally-accepted decimal system corresponds with the natural number of fingers on the hand, or with what may be called the digital system, whereby all savage races, and even cultivated man, assist their arithmetic, this cannot be in a notation by twelves. The latter would require fresh additional integers beyond the nine in use. Enormous, almost insuperable, difficulties would be involved in this. It is true that a dozen, like a score, has always been a favourite group of numbers. But this has had no real effect on the more effective arrangement for large as well as small numbers into decimal groups of 10, 100, 1000, and so on, in preference to 12, 144, 1728, and so on. Even as regards money, although it is correct to say, as pointed out in the article DECIMAL SYSTEM, that all European nations once had a system of account, but not all of them of coinage, divided into twentieths of the pound or livre, and into twelfths of the shilling or sol, they have all, except England, deliberately discarded the duodecimal as well as the vigesimal part of this arrangement, so as to gain the superior advantages of the decimal subdivision. The division of the year into 12 months, the foot into 12 inches, and the now almost obsolete English apothecaries' pound into 12 ounces, are practically the sole remaining relics of the system.

F. H.

DUPIN, Baron CHARLES (1784-1873), born at Varzy (Nièvre), died at Paris. He came out in 1803 with distinction from the Polytechnic school, after having been at the head of the list in the entrance examination. Louis XVIII. created him a baron (1824), Louis Philippe, a peer of France (1837); he was appointed a representative of the people after the revolution of 1848, and Napoleon III. made him a senator. "The changes," he said satirically, "are not in myself, but in the powers that be!" Dupin, who was endowed with much ability, devoted his life to the extension of technical teaching in France. It was he who suggested that map of France in two colours (black and white) which shows by graduated shades the degree to which primary

instruction has been carried in every department. This most useful statistical method, though now familiar, was, in 1827, quite a novelty. Of his writings as an economist we may mention *Le petit producteur français*, Paris, 1827, 7 vols. in 8vo.

In a familiar yet witty style this little book describes, in the form of a dialogue, the strictly regulated system existing in France before 1789, and the commercial and industrial liberty which the majority of modern economists desire to see realised. The names of the two personages, the old "Prohibant" and the young "Lefranc," show clearly enough the side to which Dupin inclined then. Afterwards he became one of the pillars of the protectionist system. This time it was not the "powers that be" who had changed.

[See French *Dict. de l'Éc. politique.*—His work *The Commercial Power of Great Britain, exhibiting a complete View of the Public Works of this Country*, with atlas and plans, was translated from the French, 2 vols. (Knight), 1825.] A. C. f.

DUPIN, CLAUDE, born towards the end of the 17th century, died in 1769; he was the grandfather of Madame Georges Sand, *née* Aurore Dupin. First an officer in the French army, he became afterwards a *fermier général*. In 1745 he printed anonymously his *Oeconomiques* (Carlsruhe, 3 vols.), but the name of the place (Carlsruhe) appears to have been used to deceive the police. Notwithstanding these precautions, Dupin found it advisable to withdraw from circulation all the copies he could collect, and very few are known to exist in our days. The chapter entitled *Mémoire sur les Bleds* was published separately in 1748, and reprinted in the *Journal Économique* (February and March 1760). Dupin appears to be entitled to the honour of having been the first in France to advocate a more liberal policy concerning the corn trade, as Herbert's essay was only published in 1755. "When corn is dear," he says, "money is lavished to import it from foreign countries. Is it not a mistake not to be forgiven, to prevent its export when its price is gone down to nothing (vol. i. p. 205). . . . If the trade in corn were constantly free, corn would never be wanting (vol. i. p. 208)." However, he does not push his deductions from this principle to their legitimate conclusion, for in his proposed legislation on this subject, although he recommends a free inland trade, he shackles it with numerous formalities, and as for foreign trade, he only allows corn to be exported when the price is lower than 12 livres per sack; from 12 to 18 livres, corn may be imported against payment of a duty of 3 livres per Paris *setier;* from 18 to 24 livres, the duty is to be only of 5 sous per sack. At 24 livres a bounty of 2 livres is to be granted on imports.

Some terse and pregnant remarks may also be gathered mostly from the rest of the first volume, for instance this one (p. 115), "Money ought to be considered like any other commodity and never restrained in its natural course"; but such enlightened opinions are not followed to their ultimate conclusion. "Never has money been drawn from a state without its being provided with the same value of goods or produce, and we must suppose that these goods were useful to the buyer, for the simple reason that he has bought them" (*Oec.* vol. i. p. 114). "Money, which flows out of a state, calls other money in; the money that comes in calls other money out. This is the mechanism of trade; to oppose it is to ignore and to destroy the principles of trade. . . . It is the interest of a state to have rich neighbours; if they are poor, they will not come to buy our superfluous goods. A shopkeeper sells nothing in a place peopled with beggars. . . . It is an absolute mistake to think that we can dispense with our neighbours, and that they cannot go on without us; the richer our climate, the more we need them to consume our excess of riches. If heaven has not granted us certain goods, or if the disorder of the seasons deprives us of our usual produce, these same neighbours will come to our help" (p. 115).

Besides this work Dupin wrote, also anonymously, and with the assistance of two Jesuit fathers, some very bitter *Réflexions sur quelques parties d'un livre intitulé l'Esprit des Lois* (1749), but Madame de Pompadour interfered, and almost the whole edition was suppressed by the author. In 1759, Dupin criticised Montesquieu's views on trade, finance, and the influence of climate under the title of *Observations sur un livre intitulé l'Esprit des Lois*, but in a more temperate style, and without any indication of author, date, or place.

For a very detailed account of the printing and suppression of Dupin's books, see Du Plessis' notice on Cl. Dupin in the *Bulletin du Bibliophile*, Paris, 1859, p. 309. E. Ca.

DUPONT (or, as he himself wrote, DU PONT), PIERRE SAMUEL (1739-1817), received the addition of DE NEMOURS to his surname from the place which he represented at the constituent assembly, in order to distinguish him from another Dupont in the same assembly, and was one of the greatest of the "men of great learning and ingenuity in France" (Adam Smith) who were called "economists." Born at Paris, Du Pont early ranged himself on the side of the PHYSIOCRATS (*q.v.*) His first work (1763) attracted the friendship of Quesnay and other leaders. The most valuable of their doctrines, free trade, was ably advocated by him in his *Exportation et importation de grains*, 1764. If Quesnay was the father of physiocracy, Dupont was its godfather, for he gave it its

name by the publication of his *Physiocratie*, 1767 ; a collection of Quesnay's articles, which the editor introduced by a *Discours* (see Daire's *Physiocrates*, part i. tome ii. p. 19). To the same period belongs his *Origine et Progrès d'une Science nouvelle* (see Daire, *Ibid.* tome ii. p. 335), based upon that "little book written by Mr. Mercier de la Riviere," which Adam Smith calls "the most distinct and best connected account of this doctrine" (*W. of N.*, bk. iv. ch. ix.). Many other expositions of physiocratic doctrine were contributed by Dupont to the *Journal de l'Agriculture* . . . and the *Ephémérides* (*q.v.*), which he successively edited (1765-1772). He was aided in his editorial work by the pen and advice of Turgot. Almost the only cloud in the friendship between the two publicists arose when Dupont, with the usual indiscretion of editors, ventured to "touch up" the now celebrated "Réflexions sur . . . la richesse," contributed by Turgot to the *Ephémérides*. When Turgot became minister he did not forget his friend. Dupont was appointed to an important and confidential post ; which he forfeited on the fall of Turgot, but was afterwards employed under Vergennes, in an office not altogether congenial to a great opponent of the commercial system, the "bureau de la balance du commerce." The practical ability of Dupont was displayed in the negotiation of the treaty which secured the independence of America (1783), and the treaty of commerce with England (1786). In the constituent assembly Dupont de Nemours played a considerable part. He was president for some time. His eloquent voice was often heard on the side of sound theory and good sense. His protests against the creation and increase of the issue of assignats were founded upon the justest reasoning. Siding with the king at the *émeute* of 10th August 1792, Dupont fell under the ban of the extreme party. While hiding from their pursuit, he wrote, during this period of enforced leisure, his optimistic *Philosophie de l'univers*. Discovered at length and dragged to prison, Dupont would infallibly have been guillotined, but for the timely fall of Robespierre. Under the directory Dupont obtained the influence due to his financial ability ; but on the revolution of the 18th Fructidor he abandoned politics and retired to America. He resided in France during the empire, devoted to literary pursuits. It was during this period that he edited the works of Turgot (1809), which he enriched with interesting notes. Dupont took office under Louis XVIII. in 1814, but on the return of Napoleon once more retired to America, where he died in 1817.

It is impossible in a curt abstract to convey an adequate impression of the exuberant genius which, during more than half a century, continued to pour forth eloquent discussions on varieties of subjects ranging from the "philosophy of the universe" to the habits of insects. If in political economy Dupont made no great advance ; if, contrary to the advice of Turgot, he turned in one circle, confined to a narrow sect ; he at least purified and embellished the doctrines of that sect. He emphasised what was best in its teaching, the principle of *laissez-faire*. With potent voice he bade trade, Lazarus-like, be loosed ; "Otez-lui ses liens et laissez-le aller." The magic of his eloquence was enhanced by the influence of a character noble and disinterested. He lived up to his motto : *aimer et connaître*. The breadth of his public spirit corrected the narrowness of his theory (see EPHÉMÉRIDES).

[A full account of Dupont's economical career is given in Schelle's *Du Pont de Nemours et l'école Physiocratique*, 1888. Among earlier authorities may be mentioned Daire ; who, in the first part of his *Physiocrates*, tome ii. p. 307, gives an outline of Dupont's life and a selection from his writings. Other authorities are referred to by Schelle, who also gives a list of Dupont's writings, occupying forty 8vo pages. The principal of these works have been mentioned above. Some more detailed references to the *Ephémérides* may here be added. The "impôt direct et unique" of physiocratic theory is discussed by Dupont in *Ephémérides*, 1770, tom. v. (*Principes des Finances*) ; the "liberty of commerce" *Ibid.* (1770, vol. vi. ; *et passim*), the wastefulness of slave-labour (*Ibid.* 1771, vol. vi.) The *Fragments in Ephém.*, 1771, vol. vii., contain some striking reflections on the theory of population, a subject which was resumed by Dupont in his last work, and according to Schelle one of his best, *Examen du livre de M. Malthus*, 1817. See also *Briefliсher Verkehr Carl Friedrichs von Baden mit Mirabeau und Du Pont*, 2 vols., Heidelberg, 1892.] F. Y. E.

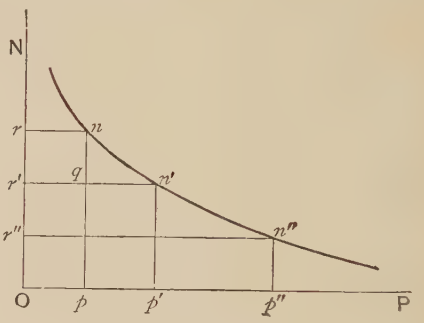
DUPONT-WHITE, CHARLES (1807-1878), born at Rouen. After having practised as a barrister at the court of cassation from 1831 to 1843, he became, in 1848, general secretary at the ministry of justice. Distinguished by the elegance of his style, he was a sound economist and a resolute thinker, but too ardent a champion of centralisation and the extension of governmental authority. His earliest work, entitled *Essai sur les relations du travail avec le capital*, 1 vol. in 8vo, 1846, shows that the bent of his mind was adverse to liberty. In that volume he vigorously opposes the maxim of Gournay, *laissez-faire*, *laissez-passer*. Of his other publications, the best known are : *De la suppression de l'impôt du sel et de l'octroi*, br. in 8vo, 1847 (he would gladly have substituted for these, taxes on landed property and capital), *L'individu et l'état*, 1 vol. in 8vo, 1856, and *La Centralisation* (a sequel to the last mentioned), 1 vol. in 8vo, 1860. His other works are principally political. He also translated the works of John

Stuart Mill on *Liberty* and *Representative Government*. A. C. f.

DUPRÉ DE SAINT-MAUR, Nicolas François, born at Paris about 1695, died 1774. He is better known in the present time by his works on money than by his translation of Milton's *Paradise Lost* (Paris, 1729, 3 vols. in 8vo), which nevertheless secured his admission into the French academy in 1733. His economic writings mentioned below are now necessarily out of date, and their places taken by more recent works on the same subject. They may still, however, be consulted with advantage.

Essai sur les monnaies ou réflexions sur le rapport entre l'argent et les denrées, 1 vol. in 4to, 1746, and *Recherches sur la valeur des monnaies et sur le prix des grains avant et après le concile de Francfurt* (1 vol. 12mo, 1762). A. C. f.

DUPUIT, A. J. Etienne-Juvenal (1804-1866), was born in Piedmont and died in Paris. An engineer and mathematician, holding the office of *Inspecteur-général des ponts et chaussées*, Dupuit was led both by his occupations and studies to reflect upon the advantage which the public derive from means of communication, and on the method of measuring with precision that species of advantage, and utility in general. His profound reflections are embodied in two articles in the *Annales des ponts et chaussées*, viz., "De la mesure de l'utilité des travaux publics," 1844, and "De l'influence des péages sur l'utilité des voies de communication," 1849. The author of these papers "must probably be credited with the earliest perfect comprehension of the theory of utility," as Jevons says (*Theory*, preface, p. 30). By the example of water supplied at different prices to a town, Dupuit shows in the first paper that "tous les produits ont une utilité, non seulement pour chaque consommateur, mais pour chacun des besoins à la satisfaction desquels il les emploie." To measure the total utility obtained by a purchaser, Dupuit employs a construction similar to that which Professor Marshall has made familiar (*Principles of Economics*, bk. iii. ch. vi.). The curve in the annexed diagram represents the variation of demand with price; the abscissa measured along OP corresponding to price, and the ordinate measured along ON to the quantity of the commodity purchased. The construction is the same as that of Cournot (*q.v.*), published in 1838; which Dupuit does not appear to have seen. Upon the principle that "il n'y a d'utilité réelle que celle qu'on consent à payer," the total utility corresponding to the consumption of the quantity *or* is measured by the area *ornp*. For the utility of each portion such as $r'r''$ is represented by the amount of money, $r'n'n''r''$, which the purchaser is just willing to give for that increment of commodity. (The reservations with which this representation must be accepted are well stated by Professor Marshall, *loc. cit.*). Such is the *absolute* utility, not taking into account what the purchaser has to pay for the quantity *or*. This value being subtracted, the "relative utility" (Professor Marshall's "consumer's rent"), is *np*P. By parity of reasoning the (relative) utility incident to the drop from the price *op'* to *op* is *nqn'*. Dupuit assumes the area of the *triangle nqn'* (a straight line being drawn through *nn'*) to be greater



than this relative utility, on the assumption that the curve is convex; which would seem not to be universally admissible. The paper concludes with some very weighty reflections on the mathematical method in political economy. Referring to the objection that statistical data for the measurement of utility are not obtainable, Dupuit replies "que quand on ne peut savoir une chose c'est déjà beaucoup que de savoir qu'on ne sait rien." If the earlier theorists, instead of formulating the balance of trade, had confined themselves to declaring that the question was above their powers, they would perhaps have done a greater service than those who afterwards exposed their errors.

In the second paper (1849), Dupuit applies these principles to the measurement of the advantage derived by the public from roads and other means of communication. First he shows that the method proposed by J. B. Say for evaluating this utility is inadmissible. He proves that a government seeking a minimum return to meet fixed charges and the maximum advantage of the public, will in general impose a different scale of charges for canals and railways, from a monopolistic company seeking a maximum return (cp. Marshall, bk. v. ch. xiii.) The incidents peculiar to a *régime* of monopoly, that price is not in general proportional to cost, that articles will be charged according to what they will bear, that a mileage rate is not to be expected, etc., seem to be stated here as perfectly as by the most recent writers on railway problems.

These important principles are restated by Dupuit in several of his articles in the *Dictionnaire d'Économie Politique*, of which the follow-

ing is a complete list—"Eaux," "Péages," "Routes," "Voies de Communication." It will be seen from the last that Dupuit is not blind to the advantages of competition; though, in cases where it is impossible, he accepts governmental management. With these articles should be read one which appears to have been originally designed for the *Dictionnaire*, and accordingly is referred to in the article on "Péages"—the admirable paper on "Utilité" in the *Journal des Économistes*, for July 1853; perhaps, as the editor of the *Journal* says, more "clear and methodical" than the memoirs upon which it is based, and which have been here described.

A full statement of the offices which Dupuit held, of the engineering works which he constructed, and of the books and papers which he wrote, both in his capacity of engineer and of economist, will be found in *Titres Scientifiques*, 1857 (British Museum, *sub voce* Dupuit).

F. Y. E.

DUQUESNOY, Adrien Cyprien (1763-1808). A member of the States General of France, where he generally voted with Mirabeau, he was *maire* of Nancy, and later on of an *arrondissement* of Paris, and one of the chief writers in the *Ami des Patriotes* (1792). He did most useful work by his *Recueil de Mémoires sur les Établissements d'humanité*, including translations of Rumford, Eden, Bentham, Ruggles, Howard, etc. He also published, separately, translations of Hoeck's *Statistical View of the States of Germany*, and of Bentham's *Tracts on the Poor* (*Esquisse d'un Ouvrage en faveur des Pauvres*), Paris, 1802. E. Ca.

DURATION OF LIFE (as an Element of Well-being). Length of days is referred to in the earliest literature as a blessing to the individual; but it has been reserved for modern statistics to estimate more exactly the advantage which a community derives from an increase in the longevity of its members. A rough measure of the prolongation of life is afforded by the Expectation of Life (*q.v.*). Thus, for the period 1871-80, as compared with the period 1838-54, the mean life-line of males (41·35 years), is longer by 1·439139 years. In other words a million of males born in the later period would live 1,439,139 years more than in the case of the former period. So a million of females would live 2,777,584 additional years, if born in the later period. Or, taking the mean annual number of births as 858,878—437,492 males and 421,386 females—the additional years lived by this annual number of children would be 1,800,047. But this addition of nearly two million years of life does not represent the whole advantage which the community derives from the change in the death-rate. For of these additional years the greater part—66 per cent in the case of males and 65 per cent in the case of females—are lived at the most *useful* period of life, the period at which the individual is least dependent on others and most productive, namely, between the ages twenty-five and sixty-five. This calculation is taken from the supplement to the forty-fifth annual report of the Registrar-General (1885). A similar conclusion had already been reached by Dr. Noel Humphreys upon somewhat different and less perfect data (*op. cit.* x. note; and *Journal of the Statistical Society*, 1883).

As to the causes which have contributed to this gain of life, see the Registrar-General's supplementary report above referred to, and Dr. G. B. Longstaff's paper on "The Recent Decline in the English Death-rate," *Journal of the Statistical Society*, 1884; and his *Studies in Statistics*. Some other writers on the subject—not all wise—are mentioned by Dr. Humphreys at the beginning of the paper above referred to (*Journ. Stat. Soc.*, 1883). F. Y. E.

DUSSARD, Hipp. (1798-1876), born at Morez, died at Nyer near Olette (Eastern Pyrénées). He commenced life as a publicist, writing in the *Revue Encyclopédique*, 1819-33; the *Bulletin de Ferussac* (a periodical devoted to science and industry), 1823-30; and in the *Temps*, the journal founded 15th October 1829 by Jacques Coste, which ceased to appear 17th June 1842, up to which date he remained a contributor. He signed the protest of the journalists against the *ordonnance* of July 1830, but he did not, like many others, derive any advantage from the new *régime*, as he preferred to remain in opposition. He supplied, in 1844, working with Eug. Daire, the notes to the edition of the works of Turgot (2 vols. large in 8vo.) published by Guillaumin. He assisted from its commencement (in 1841) in editing the *Journal des Économistes*, in which he wrote many articles, having been editor-in-chief of that journal from February 1843 to May 1845. He was the traffic manager of the Paris and Rouen railway, and distinguished himself after the revolution of 1848 by placing himself at the head of the courageous volunteers who undertook the defence of the railways in the neighbourhood of Paris, which had been overrun by bands of incendiaries. His brave conduct gained for him the office of prefect of the Seine inférieure, in which position he successfully closed the national workshops (see Ateliers Nationaux); this judicious intervention brought to an end the labour disturbances, and restored the confidence of employers. He left this post for the council of state, in which he did not remain long; his name having been drawn as one of the members who had to retire. Returning to private life, he busied himself with various occupations, such as works of irrigation, forestry, and railways, in the management of all which he displayed great ability.

A. O. f.

DUTCH AUCTION. See Auction.

DUTCH SCHOOL OF ECONOMISTS. In Holland, during the 17th century, the most glorious period of Dutch history, economics were not regarded as an independent science, deserving separate treatment. Economic theory at that date must be sought for in the works of eminent writers on theology, jurisprudence, and politics. Perhaps the best information can be found by studying the means adopted to promote the general welfare of the country. Practice preceded theory. The discussions on practical questions of the day gave rise to innumerable pamphlets, and by searching these we may still trace the general ideas underlying action. *Laspeyres* and *Van Rees* among others have done good service in utilising these sources of information. The titles of their works are mentioned below.

In this place attention can only be called to some of the most illustrious writers whose opinions on economic questions were ahead of their times, although in many cases the living generation refused to be guided by their advice.

Hugo Grotius (1583-1645) advocated freedom of commerce as one of the natural rights of man. It leads to a useful division of labour between nations. Both parties gain by the exchange, the abundance of the one supplying the penury of the other. Grotius allows the right of free immigration to foreigners. In his opinions concerning value we find a forecast of the most recent theories, as he distinctly asserts the subjective element in the determination of price. "Mensura ejus quod res quaeque valeat maxime est naturalis indigentia. . . . Non tamen haec unica est mensura. Nam hominum voluntas, quae rerum domina est, multas res magis desiderat quam sunt necessariae. . . . Et contra evenit ut res maxime necessariae minoris sint propter copiam" (*De Jure Belli ac Pacis*, ii. ch. xii. § 14, n 1). Grotius describes money as the common measure of value, and regards fixity of purchasing power as the first quality money ought to possess. Though gold and silver do possess that quality in a satisfactory degree, he recognises that abundance and scarcity in the precious metals, as in other goods, will bring with them variations in their purchasing power. Grotius was among the first to defend the taking of interest on scientific grounds, and distinguished the different elements in the interest, viz.—the price for the use of capital,—the wages of the creditor and the insurance-premium for his risk. Nevertheless he was opposed to taking compound interest, and advocated the fixing of a maximum interest by legislation.

Graswinckel (1600-1668) is conspicuous for his defence of free trade in corn, and for his clear insight into the causes of the general rise of prices during the latter part of the 16th and the beginning of the 17th century. He describes the pernicious effects of forbidding the re-export of foreign corn, as the doing this would deter foreign producers from sending their corn to our markets. Even in a state of famine, when it would be legitimate on general grounds, practical considerations make Graswinckel advise against such a prohibition, because the best remedy is the high price itself. As water flows to the lowest level, so corn flows to the highest market. Their own private interest will prevent merchants from exporting corn in times like these. A policy that proscribes itself ought not to be proscribed by odious restrictions. Graswinckel clearly sees the use of forestalling corn in times of approaching dearness. It is folly to consider speculators as the cause of the dearness. He that keeps in his granaries the corn he has got, in the hope of a rising price, does not cause the high price, but the expected rise causes him to keep what he has got. The best thing government can do for preventing excessive dearness is to collect statistics respecting the quantity of corn still in the country. The knowledge where this quantity is, which will probably be more than enough to feed the people for two years, will dispel unreasonable fears and prevent hoarding by private individuals. Apprehension of dearness is the principal cause of dearness.

Concerning the rise of general prices in his time, Graswinckel wrote: "The change has been one, not in the commodities, but in the money. As there is four times more money in the world than there was before, there must necessarily follow a decline in money and a rise in commodities, if such can be called a rise. For leaving money out of account, and measuring commodities against each other, wages among the rest, all things have remained at their former level." Considering these variations in the value of money, he expressed the opinion that the best way to fix the rent of land would be to stipulate for payment in corn.

Salmasius (1588-1658) was the most influential among the many writers who defended the taking of interest. But while most of them hoped to protect the lower classes against excessive rates by legislation or by the monopoly of a public body, Salmasius recommended confidence in free competition, as that would compel money-lenders to lower interest to a fair rate in order to augment their business.

The works of Pieter de la Court (1618-1685) on economic subjects are among the best, not only of this, but of all other countries. One of his works, the *Aanwysing*, pub. 1669 (see below), has been ascribed by deliberate fraud to the statesman Johan de Witt, in a French translation under the title *Mémoires de Jean de Witt*, 1709 (also in English, 1743, *Political Maxims of the State of Holland*, by John de Witt, pensionary of Holland, London, J. Nourse). De la Court deserves a high place in the history of economic

thought for his ardent defence of the freedom of industry against corporations and monopolies. In his native city, Leyden, he found ample evidence for illustrating his conviction that industry suffers under government tutelage, and that the interests both of producers and consumers are best served by free competition, even in freedom to make cheap goods, perhaps of low quality, but within the means of their customers. Producers ought to have absolute liberty in order to be able to follow the changing tastes and fashions of consumers. Regulations, even if they could be efficient in the beginning, would remain unaltered long after they had become obsolete, as, even under the best of governments, a law once made is only amended when much harm has been done. De la Court not only attacked the regulation of industry and the testing of manufactured goods by public authority, but also all close corporations of producers. Under the pretence of protecting citizens against aliens, and of procuring work for native industries, these corporations deprive all their fellow-citizens of the liberty of buying where they find the commodity can be had the cheapest and the best; they retard the increase of the community by increasing the difficulty of finding a living in it; they give rise to all kinds of vexatious disputes concerning the limits of their rights, and in the end they do not even benefit those persons for whose profit they were intended, as by secure earnings and luxury men everywhere are made idle, lavish, and stupid. Still De la Court did not defend freedom of trade in the modern sense of the term. He recommended freedom of labour and of competition as the best policy for strengthening his native country, but he was not opposed to import and export duties on foreign manufactures as high as the interests of commerce would permit.

Of the statesman, *Johan de Witt*, we may mention here a memoir on the value of annuities, the one of his writings which, excepting his correspondence, has most attracted public attention.

We can only recall the names of other distinguished writers as Usselincx, Boxhorn, *Huber*, *Bynkershoek*, *Noodt*, etc.

In the 18th century we find among others the works of *Ricard*, *De l'Espine*, and *Le Long* on commerce, of *Pinto* on credit, of *Luzac* on the wealth of Holland, and many treatises on the decline of prosperity and the means of reviving trade.

Among political arithmeticians Kersseboom deserves to be remembered as an original writer, who improved the method of Halley in constructing life-tables by following out the history of a generation of persons of a certain age, individually, till all of them had died. *Struyck* and *Nieuwetytk* worked in the same direction.

In the 19th century political economy has found a place in the curriculum of the Dutch universities. Along with statesmen like Van Hogendorp, Van Hall, and Thorbecke, the Professors Ackersdyk, Van Rees, and Visser-ing are to be named among its most distinguished representatives. The central figure among Dutch economists of the last generation was W. C. Mees, for many years (1863-1884) the president of the Netherlands Bank. His works on economics are not very numerous, but all of them are characterised by great power and originality of thought. He never joined in the optimism of the French school of Bastiat and other partisans of *laissez-faire*. Neither could he assent to the principles of the German economists who regarded economics as a purely historical study. Against the French he maintained the fundamental truth of Malthus' doctrine on population, against the Germans the necessity of abstract economic reasoning. In questions of economic method he followed Ricardo, but with a fuller understanding of the limitations of the abstract treatment, and a much more careful handling of his hypothesis. His book, *Chapters in Political Economy*, a model of sound reasoning and clear insight into the problems of distribution and foreign trade, has not met, even in his native country, with the degree of attention it deserved, as it was more difficult reading than most of those who concerned themselves with economics were accustomed to. It may be considered as the best exposition of the general theory of economics before the works of Jevons and the Austrian school of economists. In 1869 Mees deduced from a correct theory of value the principles of international bimetallism which, since that date, have steadily gained ground among students of monetary science in all countries. In other papers, read before the Dutch Royal Academy of Science at Amsterdam, he treated of the incidence of taxation and of the elementary conceptions of political economy. In his youth he published an exhaustive history of banking in the Netherlands.

Among recent Dutch economists *N. G. Pierson*, successor of Mees as president of the Netherlands Bank and at one time chancellor of the exchequer, held high rank. His *Principles of Economics* was translated into English (Macmillan, 1902-1912). In his *Manual of Political Economy* he succeeded in interesting cultivated people in the study of scientific economics. Through this work the latest improvements in economic theory, initiated by Jevons, Menger, and others, and their application to problems of distribution, have reached wide circles of readers. Pierson combines an extensive knowledge of the literature of political economy and a full appreciation of the historical inquiries of our eastern neighbours, with the gift of prudently using the deductive method. Though his mode of treatment is less systematic than that of Mees, it is much more attractive; he always

tries to interest his readers in the general knowledge he wishes to impart to them, by reference to the practical problems on which the theories throw light.

The study of Mees and Pierson by the younger generation of economists explains the slight influence in Holland of the German school of Schmoller and others, who recommend an exclusively inductive treatment of economics, and the favourable reception of the doctrines of the Austrian school. The question of economic method was much discussed in the Netherlands a few years before the work of Menger on the subject appeared. *Borgesius* and *Levy* had recommended the inductive treatment, and were refuted, among others, by *D'Aulnis*, *Pierson*, and *Heymans*. Since 1880 the controversy may be considered as closed.

Following the lead of Mees and Pierson, many young authors have attempted to work out special problems on deductive principles. In this spirit *Beaujon* wrote on the theory of international trade, *Harte* on interest, *Falkenburg* on the rate of wages, *Verrijn Stuart* on socialistic theories of value. Much highly original work has been done by applying the principles of Jevons and Menger to the theory of taxation, in the works of *Cohen Stuart* on the progressive income tax, and by *Tasman* on the incidence of taxation.

Another feature of the Dutch economic school of the present day is its adherence to the fundamental ideas of Malthus' doctrine of population. Excepting a few writers, among others, Professors *Vissering* and *Cort van der Linden*, all are convinced that the great mass of the people cannot permanently better its standard of living, if it does not diminish competition by limiting its numbers. A lively controversy arose about Malthusianism and so-called Neo-Malthusianism about the years 1875-76. *Greven* and *Van Houten* defended neo-Malthusianism against the objections of Professor *Evers* and others. Pierson lately declared in his treatise that all the objections to that doctrine which an economist was competent to judge of, appeared to him to be invalid, and that the question ought to be definitely settled on medical grounds. Professed neo-Malthusians were called more than once to professorships at the public universities, and a neo-Malthusian league has set up an active propaganda since 1880.

Next in importance to a due regulation of numbers, Dutch economists regard all kinds of measures for "social reform." They do not proclaim Malthusianism as a panacea for all evils, but they are convinced that all other measures for elevating the masses, however useful in themselves, will avail little, unless "peopling up to them" as MILL expressed it, is prevented. The theory of *laissez-faire*, which never had been accepted without qualification, even by the older generation of economists, such as DE BRUYN KOPS and *Vissering*, is visibly losing ground in the minds of the general public, and is regarded as insufficient and incomplete by all scientific writers on economics. Here the impulse came from Germany. The new German school of the "Kathedersocialisten" found eloquent and ardent expositors in *Van Houten*, *Kerdÿk*, *Borgesius*, and others. Van Houten initiated the factory-legislation in 1874, and since that date public opinion has been steadily ripening for more extended state interference. Since 1886 parliamentary and royal commissions have collected materials for further legislation concerning the interests of the working classes, outside agriculture. A weekly paper on social questions, under the able editorship of Kerdÿk, has worked since 1887 in the same direction. Compulsory insurance has been recommended by various writers, and government seems not unwilling to propose such a measure. Trade-unionism and the co-operative movement not having attained among the working classes that degree of development their friends had wished for, the necessity of state interference begins to be recognised by many who would have preferred self-help.

Socialism in its most uncompromising shape is actively propagated by *Domela Nieuwenhuis* and others by means of papers and public meetings, and finds an increasing number of adherents among the younger generation in the great cities and in the northern provinces. *Quack* has been occupied for many years in writing an extensive history of socialism, which has now been carried down to the year 1850. D'Aulnis has given an able criticism of modern socialistic theories from MARX downwards.

In commercial matters there is but one opinion among economists in Holland. Free trade is considered the best policy for countries generally, and more so for a small country, where trade flourishes and combinations among producers would easily dominate the market if foreign competition were excluded. Beaujon defended free trade with great acumen in the second part of his essay on international trade. An agitation for duties on corn, set up a few years ago, vigorously defended by *Diepen* and in a more scientific spirit by Harte, has met with energetic resistance on the part of our best writers, *e.g.* Pierson and the younger *Mees*, and may be said to have subsided since that date.

In the "battle of the standards," Dutch economists, since the exposition by Mees of the principle of bimetallism, are agreed that theoretically that would be the best system, because it would give the greatest guarantee of fixity of value in the standard coins. We possess many valuable articles on the question by *Boissevain*, who recently gave a very able defence

of the bimetallic theory against its English and continental opponents in his work *The Monetary Question*.

The necessities of the exchequer and the need for reform in the fiscal system have directed attention in an unusual degree to questions of finance. *Sickenga* has published, commencing with 1863, an historical exposition of the rise of the present system, in establishing which men like GOGEL, *Van Hall*, and *Betz* took a prominent part; *Sprenger Van Eyk* wrote a masterly *résumé* of the present situation with all its imperfections; Pierson, *Van Nierop*, Cort van der Linden and *Treub* are among the most distinguished writers on the principles of taxation.

Holland possesses a *Monthly Review*, of long standing, exclusively devoted to economics, edited from the first by *De Bruyn Kops* and after his death (1888), by a committee, including many of the writers mentioned above.

Statistics are much indebted to *De Bosch Kemper*, who founded the Dutch statistical society and has edited since 1849 the year book of that society.

Below are given the titles of the works mentioned in this article.

Laspeyres, *Geschichte der volkswirthschaftlichen Anschauungen der Niederländer und ihrer Litteratur zur Zeit der Republik*, 1863.—Van Rees, *Geschiedenis der Staathuishoudkunde in Nederland tot het einde der achttiende eeuw* (History of political economy in the Netherlands to the end of the 18th century), 2 vols. 1865-68.

17th century: Grotius, *Mare liberum*, 1609; *Inleiding tot de Hollandsche Rechtsgeleerdheid* (Introduction to Dutch jurisprudence); *De jure belli ac pacis*, 1625.—Graswinckel, *Aenmerkingen ende betrachtingen by 't Placaetboek op 't Stuck van de Lijftocht* (Remarks on the edicts concerning the trade in corn), 1651.—Salmasius, *De usuris*, 1638; *De modo usurarum*, 1639; *Dissertatio de foenore trapezitico*, 1640.—Pieter de la Court, *Het welvaren der stad Leyden* (The Welfare of the city of Leyden), 1659; *Interest van Holland ofte gronden van Hollands-Welvaren* (The Causes of the wealth of Holland), explained by V. D. H. (Van der Hove, = De la Court), 1662; *Aanwysing der heilsame politike Gronden en Maximen van de Republike van Holland en West Friesland* (Demonstration of the salutary political maxims of the Dutch Republic), 1669.—Johan de Witt, *Calculatie van de waardye der Lyfrenten* (Calculation of the value of Annuities, etc.), 1671.

18th century: Le Moine de l'Espine, *De Koophandel van Amsterdam* (*Le Commerce d'A.*), 1715 (new editions by Le Long).—Ricard, *Traité du Commerce*, 1715; *Le négoce d'Amsterdam*, 1722.—Kersseboom, *Proeve van politique Rekenkunde, vervat in drie verhandelingen tot eene proeve om te weeten de probable menigte des volks in de provintie van Holland en West-Vriesland* (Essay in Political Arithmetic, contained in three dissertations on the probable numbers of the population of the provinces of Holland and West Friesland), 1748 (the original editions from 1738 to 1742).—Pinto, *Traité de la circulation et du crédit*, 1773.—Luzac, *Hollands rÿkdom* (The Wealth of Holland), 4 vols., 1780-83.

19th century: Van Hogendorp, *Bÿdragen tot de huishouding van staat in het Koningrÿk der Nederlanden* (Contributions to the Political Economy of the Kingdom of the Netherlands), 10 vols., 1818-25.

De Bruyn Kops, *Beginselen der staathuishoudkunde* (Principles of Political Economy), 1850.—Five editions—Vissering, *Handboek der praktische staathuishoudkunde* (Manual of Practical Political Economy), 1860.—Four editions—Mees, W. C., *Overzicht van eenige hoofdstukken der staathuishoudkunde* (Sketch of some Chapters in Political Economy), 1866.—Pierson, *Grondbeginselen der staathuishoudkunde* (First Principles of Political Economy (1875-76).—Three editions—*Leerboek der staathuishoudkunde* (Manual of Political Economy), 2 vols., 1884-90.

Heymans, *Karakter en methode der staathuishoudkunde* (Scope and Method of Political Economy), 1880.—Harte, *De rentestand* (On the Rate of Interest), 1883.—Falkenburg, *Bÿdrage tot de leer van het arbeidsloon* (On the Theory of Wages), 1890.—Verrÿn Stuart, *Ricardo en Marx*, 1890.—Cohen Stuart, *Bÿdrage tot de theorie der progressieve inkomstenbelasting* (On the Theory of the Progressive Income-tax), 1889.—Tasman, *Afwenteling van belastingen* (On the Incidence of Taxation), 1889.

Greven, *De Ontwikkeling der Bevolkingsleer* (The Development of the Theory of Population), 1875.—Articles in the periodical *Vragen des Tyds* (Questions of the Times) since 1875, by Van Houten, Kerdÿk, Borgesius, etc.—*Sociaal Weekblad* (Weekly Paper on Social Questions), since 1887, ed. Kerdÿk.—Quack, *De Socialisten, Personen en stelsels* (The Socialists, the Men and the Systems), 1875 *seq.*, 3 vols.—D'Aulnis de Bourouill, *Het hedendaagsche Socialisme toegelicht en beoordeeld* (A Description and Criticism of Contemporary Socialism), 1886.

Beaujon, *Handel en handelspolitieck* (On Foreign Trade and its Policy), 1886.—Harte, *Vrijhandel en Bescherming* (Free Trade and Protection), 1890.—Mees (M.), *Nadulen van het protectionisme voor de werkende klassen* (Why the Working Classes lose by Protection), 1891.

Mees, W. C., *Proeve eener geschiedenis van het bankwezen in Nederland* (Essay on the History of Banking in the Netherlands), 1838; *De muntstandaard in verband met de pogingen tot invoering van eenheid van munt* (On the Monetary Standard and an International Unit of Money), 1869.—Boissevain, *The Monetary Question*, 1891.

Sickenga, *Bÿdrage tot de geschiedenis der belastingen in Nederland* (Contributions to the History of Taxation in the Netherlands), 1864; *Geschiedenis der Nederlandsche belastingen sedert het jaar 1810* (History of Dutch Taxes from the year 1810), 1883, 2 vols.—Sprenger van Eyk, *De rÿks-en gemeentebelastingen in Nederland* (General and Local Taxation in the Netherlands), 1891.—Treub, *Ontwikkeling en verband van de Rÿks, Provinciale-en Gemeentebelastingen in Nederland* (On the Development of and the Relation between Imperial, Provincial, and Local Taxes in the Netherlands), 1885.—Cort van der Linden, *Leer-*

boek der financiën. De theorie der belastingen (Manual of Finance. The Theory of Taxation), 1887.

Sloet tot Oldhuis, *Tijdschrift voor staathuishoudkunde en Statistiek* (Magazine of Political Economy and Statistics), 1841-75, 28 vols.—De Bruyn Kops, *De Economist*, 1852-91, 69 vols.—*Staatkundig en staathuishoudkundig jaarboekje* (Annual of the Dutch Statistical Society), 1849-84, 36 vols.—*Jaarÿfers. Annuaire statistique des Pays-Bas*, since 1881; *Bÿdragen van het Statistisch Instituut*, since 1885 (Publications of the Statistical Bureau of that Society).—Falkenberg, *Bÿdrage tot de leer van het Arbeidsloon*, on the lines of the Austrian economists.—Cossa, *Introduzione allo Studio della Econ. Pol.*, 1892. H. B. G.

DUTENS, Joseph Michel (1765-1848), born at Tours, was inspector-general of roads and bridges (*ponts et chaussées*) from 1830 to the time of his death. In his writings he manifests a spirit retrograde even relatively to the time when he lived, and favourable to government regulation. With all this he was conscientious and hardworking. In 1840 he was admitted to the Academy of Moral and Political Science.

The economic works published by him are entitled: *Analyse raisonnée des principes fondamentaux de l'économie politique*, 1 vol. in 8vo, 1804. —*Philosophie de l'économie politique ou nouvelle exposition des principes de cette science*, 2 vols. in 8vo, 1835.—*Essai comparatif sur la formation et la distribution du revenu de la France en 1815 et 1835*, in 8vo, 1842.—Finally, *Des pretendues erreurs dans lesquelles, au jugement des modernes économistes, seraient tombés les anciens économistes, relativement au principe de la richesse nationale*, in 8vo, 1846. A. C. f.

DUTOT. No biographical details respecting this author are discoverable. It is only known that he was cashier of the India Company in which the well-known John Law was concerned. (The name of this company was changed from that of *Compagnie d'Occident* to that of *Compagnie des Indes*, May 1719.) The book of which Dutot was the author is entitled *Réflexions politiques sur les finances et le commerce* (2 vols. 1718-1738, reprinted in 1743, 1754, and also in the collection of Guillaumin). In it he examines the questions what would be the effect on the public revenue, on the price of merchandise, on the foreign exchanges, and in consequence on trade, of the increase and diminution of the monetary value (*i.e.* of the purchasing power) of the circulating medium (money). This work, although too partial to the *Système* of Law, is very instructive reading, especially when its date is remembered. It was written in opposition to the views of Melon (*q.v.*)

["Les Réflexions de Dutot sont incontestablement ce qu'il y a de plus profond sur le système de Law, et sur la cause de sa chute," Thiers. See reference in M'Culloch's *Literature of Pol. Econ.*, p. 344.] A. C. f.

DUTY, CUSTOMS. See Customs.

DUTY, EXPORT. See Exports, Duties on.

DUTY, IMPORT. See Import Duties.

DUTY, Legacy, Probate, Succession. See Death Duties.

DU VERNEY. See Paris Du Verney.

DUVILLARD DE DURAND, Etienne (1755-1832), born in Geneva of an ancient French Huguenot family. He was member of the French *Académie des Sciences*, and head of the statistical department of population in the office of the French ministry of the Interior; he is best known by his *Tables of Mortality*, which are inserted (p. 159) in his *Analyse et Tableaux de l'Influence de la petite Vérole sur la Mortalité* (Analysis and Tables of the Influence of Smallpox on Mortality), Paris, 1806. They have long been in use in France. According to Quérard (*France Littéraire*), he left mathematical dissertations in manuscript under the titles of "social mathematics," "mathematical statistics of population," and "A mathematical theory of banking and finance," which are the object of a report to the *Académie des Sciences*, given as an appendix to the *Analyse et Tableaux*. In 1787 he published his *Recherches sur les Rentes, les Emprunts et les Remboursements*. E. Ca.

DWELLINGS, Industrial, may be defined as homes for the poorer wage-earning classes specially constructed with a view to meeting the particular needs of the occupants, and ameliorating their physical and moral condition Since about the year 1840 the construction of such dwellings, in or near centres of labour, has been, in this country, the object of public and private enterprise, as well as of extensive national and local legislation (see Dwellings, Regulation by the State in England, and bibliography of same). The object of such enterprise has been "to provide, instead of miserable house accommodation for which extremely high rents are charged, which is ill arranged, insanitary, overcrowded, and lacking the conditions under which the ordinary decencies of life can be observed, clean homes at moderate rents, with proper ventilation and sanitary arrangements, and not too far from the places where the occupants have to work" (*Report of Dwellings Committee of Charity Organisation Society*, August 1881, the whole of which report may be advantageously studied on the subject). The various evils resulting from the unsatisfactory dwellings of the poor will be found detailed in the evidence given before the Royal Commission on the Housing of the Working Classes, 1885, and in the First Report of the Commissioners issued in 1889; but it may be briefly stated that in the design, construction, and location of industrial dwellings it is specially intended to mitigate or remove the following defects:—(1) Undue crowding, either of houses on a site or of occupants in single apartments. (2) The immorality which is the frequent result of so large a number occupying one room as to make decency impossible. (3)

The wasteful disposal of tenants on a given area, owing to their homes being inconveniently planned or designed originally for a different class of occupant. (4) Unduly high rents resulting partly from the last defect. (5) Unhealthy conditions arising from the overcrowding above mentioned, from faulty construction, or from lack of proper sanitary appliances. (6) Inconvenient distance from the daily work of the tenants.

Whereas it has been stated that, in a specially constructed building, from 1200 to 1600 tenants can be accommodated per acre without overcrowding, while the same area would, even in a "crowded" district contain only some 300 or 400 if housed in the old-fashioned manner and in old-fashioned dwellings, it is reasonable to expect that a great financial profit to the owners should accompany the substitution of "model" dwellings for houses of the old unsatisfactory class. According to reports, events did not, in the earlier days of the movement, altogether justify these expectations, though some of the companies owning industrial dwellings realise substantial interest on their capital. It appears that legislation while facilitating the acquisition of land for the purpose of building model blocks, has occasionally given such delay and publicity to the transaction as to prejudicially affect the cost. Hence in some of the provincial towns of Great Britain the more cautious movements of the purchasers, even when backed by legislation, have been attended with more successful results than similar but more open negotiations in the metropolis, where the knowledge of the compulsory powers has led to exorbitant demands for compensation. (At the same time see the evidence on p. 418 of the *Royal Commission Minutes*, and the suggestions there made as to the terms on which the Peabody Trust bought from the Board of Works.) Further it has been stated by experts specially called in to advise on the financial aspects of these schemes, that "to build for the lowest self-supporting class in central positions in London the land must practically be given." This statement and the fact that more than one "Dwellings Company" now secures a satisfactory interest on its outlay, are to be reconciled partly by the circumstance that it is not always, nor perhaps often, the lowest classes who occupy the "model" dwellings, partly by the fact that not all the dwellings even of one company are built on "central" sites, and partly also by the consideration that the associations which promote these buildings may be broadly divided into two classes:—(1) Those which are purely philanthropic, or at least do not make a dividend their first aim. (2) Those whose primary object is to realise a large proportion of rental to outlay. It is satisfactory, however, to learn from the published accounts of 1890 that, with the exception of the Peabody Trustees, even the most philanthropic of these institutions realise a dividend of from 4 to 5 per cent, the percentage of gross rental upon cost varying from 7·6 to 9·1. During that year the Peabody Trust received a gross rental of 5·1 per cent on cost, and spent 2·1 per cent. The Improved Industrial Dwellings Co., whose undertakings have been amongst the most extensive, pay a 5 per cent dividend, while 4½ per cent is reached by the Metropolitan Association, which has been nearly fifty years in existence. The Peabody Trust, instituted in 1862 during the lifetime of Mr. Peabody, ranks among the most important of the metropolitan agencies. It was stated in 1881 that whereas the rents of three-room tenements in their buildings varied in a period of five years from 3s. 11d. to 4s. 4½d. per week, the average wages of the tenants of these rooms was from £1 : 3 : 1 to £1 : 5 : 10. Thus less than one-fifth of the wages was expended in rent, a satisfactory condition in face of the evidence given before the Commission that in dwellings of the unimproved class 88 per cent of the poor population paid more than one-fifth of their income in rent, 46 per cent paying from one-fourth to one-half, while 3s. 10¾d. might be taken as the average rent of one room let as a tenement. The Trustees at the time of the commission were stated to let their rooms at about 20 per cent less than the commercial companies, their charge for a single room being 2s. and upwards. No doubt the lowness of their rents has served to keep down the rental in the "model" dwellings of other proprietors. There is great competition for admission to the Peabody buildings in the more popular neighbourhoods, recommendations of good character are required of the applicants, and thus it is a sort of guarantee of respectability to have lived in a Peabody Building. A result of this competition and the consequent selection of applicants is that the better class are chosen, and consequently the Trustees' dwellings are practically not available for the lowest or poorest classes.

An epoch in the early history of the "dwellings" movement was marked by the erection, on ground adjoining the Great Exhibition of 1851, of a model dwelling from designs of Mr. Roberts, and under the initiative of Prince Albert, who was at the time President of the Society for the Improvement of the Condition of the Labouring Classes. The special feature in the construction of this block, which contained four complete dwellings on two floors, was its fireproof nature. The walls were of special hollow bricks, and the floors of a similar material set in arches and covered with "metallic lava." Each tenement contained a living room, parents' bedroom, two small bedrooms, a scullery, and a W.C. (For illustrations and descriptions of this building see *The Builder*, 1851, pp. 174, 311, 343). In the following year a competition

was instituted at Nottingham for designs of similar buildings; and a block of dwellings, more or less on the "Prince Albert" model, was erected at Windsor. About the same date various efforts were made in the provinces to improve labourers' dwellings, chiefly in the north of England, by the enterprise of large owners of land or employers of labour. Such were the building of the workmen's colonies at Saltaire and Copley, by Mr. (afterwards Sir Titus) Salt and by Mr. Akroyd respectively, the latter building also the village of Akroydon. Good examples of such colonies are the model settlements at Port Sunlight near Liverpool, Bourneville near Birmingham, and Earswick near York. In 1851 Mr. Denison built a set of single men's lodgings at Leeds, and similar lodgings were built in Huddersfield in 1854. Sir Sydney (then Mr.) Waterlow was among the first promoters of the typical modern metropolitan artisans' dwellings. He began his operations in 1860, at first with his own capital, and built no fewer than ninety tenements. His next step was the formation of the Improved Industrial Dwellings Company, the above-mentioned "Society for the Improvement of the Condition of the Labouring Classes," and the "Metropolitan Association," being already established. The principal organisations in existence in London (1909) are the Metropolitan Association for Improving the Dwellings of the Industrious Classes, dating from 1847, with fourteen sets of dwellings containing 1441 tenements (5105 rooms); the Improved Industrial Dwellings Company with 5421 tenements (19,945 rooms); the Peabody Fund with eighteen sets of dwellings containing 5469 tenements (12,328 rooms); the Artisans', Labourers', and General Dwellings Company, ten sets of buildings with 1467 tenements (3495 rooms) and 6195 cottage dwellings; the East End Dwellings Company with 2096 tenements (4276 rooms); the Guinness Trust with eight separate buildings containing 2574 tenements (5338 rooms); the six Rowton Houses, hotels for working men with rooms for 5162 persons. These, all private enterprises, working on a commercial basis, with others of the same kind, provide accommodation for over 150,000 persons. The late Mr. W. R. Sutton in 1909 left nearly £2,000,000 for providing good working-class dwellings, and blocks for the housing of 300 families have been begun in the City Road. As early as 1867 thirty towns in the provinces of England had formed an association or taken some definite action towards improving the dwellings of artisans, but this is not carried out on a large scale. Newcastle, Leeds, Hull, and Dublin are among those towns in which private enterprise assists improved housing. Municipal building has extended in the provinces. Down to the end of 1906, 142 local authorities (including the London County Council and twelve Metropolitan Boroughs) had put into practice Part III. of the Housing Act of 1890, which provides for the erection of working-class dwellings. These were sixty-nine County Boroughs and Town Councils, forty-nine Urban District Councils, and twelve Rural District Councils. The dwellings consist of lodging-houses, block dwellings, tenement houses, cottage flats, and cottages, providing 20,506 dwellings, with 56,949 rooms. London, Liverpool, Manchester and Salford, Birmingham, and Newcastle, Edinburgh, Glasgow, Aberdeen, Dublin, and Belfast are among the towns which have done most in this way. The figures, however, show that municipal building has done less in the whole United Kingdom than private enterprise in London alone.

A great work in the "housing of the poor" was carried on for more than twenty years by Miss Octavia Hill upon a system of her own, which is known by her name. Miss Hill, who was opposed to the prevalent methods of building and conducting "model dwellings," objected to them, among other reasons, because they do not help the most necessitous poor, nor can they in any way ameliorate the actually criminal classes, who are obviously undesirable tenants for blocks. They are a nuisance to more respectable neighbours, and if grouped together are destructive to property. The cardinal point of Miss Hill's "system" was a carefully organised method of rent collection. She had at her service a body of unpaid collectors whose self-imposed duty was, while collecting the payments due, to inspect the tenants and their manner of life, and by every means of personal influence to assist the more degraded to improvement. Though Miss Hill built several new houses, her work principally consisted in buying up old buildings, generally for the sake of tenants already occupying them, over whom she was desirous of exercising moral influence, while at the same time ameliorating the condition of their homes. The first act on acquiring a property is, if needful, "to put the drains, water-supply, and roofs to rights." Other improvements follow in proportion as the tenant shows himself appreciative of these attentions, and ready to protect his dwelling from misuse and destruction.

As regards the general principles of construction which are found to be most successful in block dwellings, it may be noticed that the buildings of the best types, though varying, have certain essential features in common. They differ from ordinary tenements in having a staircase, or staircases, which are not only common to the tenants, but open to the public; the door, if any, at the entrance being open at least by day. Five or six stories is the usual height; the buildings commonly stand round a wide square or quadrangle entered by an archway from the street, the

entrance to the staircases being from within the square. Light and air are primary considerations, and tall dwellings should not stand in a narrow street, but with an open space round them, or the tenants of the lower rooms will have insufficient light. The staircases are sometimes open to the air, but if built within the block, should be lined with glazed bricks. They are generally so tall and narrow that top light is insufficient, and in the best buildings they are provided with good windows. All windows of rooms should open direct into the space in front or back of the buildings, not into narrow areas, as it is important to get direct daylight. Sanitary accommodation is one of the debated problems among designers of these buildings, For convenience, cheapness, and simplicity, it is better to collect the apparatus into a distinct portion of the building. Where the tenements are arranged on the external gallery system, with only one or two staircases in a block, the W.C. accommodation is sometimes grouped together by the staircases. But among the more respectable class of residents greater privacy is preferred, and a separate W.C. is provided for a small group of tenants. An approved arrangement is that on each floor of a staircase there should be four sets of rooms, one wash-house (with copper washing trays and a bath) serving the whole set of four, and two sinks and closets. By means of this distribution a certain privacy is maintained, and in the matter of the wash-house an objection is met which is almost fatal to the prospects of some of the dwellings in which a wash-house common to the block is provided in the upper part of the building. In the best blocks, however, the dwellings are self-contained, each having a scullery fitted with copper and sink, and beyond it, shut off by a door, a closet and coal-bunker.

Tenements in model dwellings vary in size from one to six rooms, but by far the greater number consist of two. Rents (weekly) vary from 4s. 6d. for 2 rooms to 15s. 6d. for 6 rooms in London ; 3s. for 2 rooms to 7s. 9d. for 6 rooms in the provinces. In Scotland 2s. for one room to 6s. 5d. for 3 rooms ; in Ireland 1s. 6d. for one room to 6s. 9d. for 4 rooms.

The occupations of the tenants vary so greatly as to defy analysis ; all whose work is inoffensive or is not done at home are considered suitable tenants if respectable ; but in well-managed blocks those trades are considered inadmissible which can be in any way obnoxious to occupants of the building. It is important to realise the proportion of wages to rent. In a set of one-roomed tenements rented at from 3s. to 4s. the wage-earners were found to make from about 15s. to 28s. a week, in another building, three-roomed tenements at 4s. 6d. were occupied by families in which the father earned from 25s. to 30s.

The difficulty of obtaining sufficient sites in central positions has induced the building of blocks of artisans' dwellings in suburban districts. The consequent distance of the occupants from their work leads to two difficulties : the impossibility of return for the midday meal, and the expense of travelling. The former of these has been obviated by the action of many employers who have provided mess-rooms for their work-people. The second difficulty is partly met by the institution of workmen's trains. These trains have been of great service to the working classes living in the suburbs. But a family in which there are two or three wage-earners has so much to pay in travelling that the cheapness of the trains is not a sufficient compensation for the added expense of living far from work. Again there are some classes of work, such as small jobs for tailors, in which whole families are often engaged, which cannot be carried on if the distance between the shop and the home is great.

To meet the difficulties which attend the acquisition of the ownership of a tenement in a block dwelling, the Chambers and Offices Act was passed in 1881. Its purpose is "to facilitate the management of blocks of buildings occupied in sections as separate tenements, and the disposal of each separate tenement." The number of small houses purchased through BUILDING SOCIETIES (*q.v.*) by members of the working classes shows a great desire on their part to own their homes. In this connection should be mentioned the work of the "Tenant Co-operators, Limited," a society formed in 1888 to apply to the owning and letting of workmen's dwellings the principle of co-operation. This has been developed on slightly different lines carrying out the method known as Co-partnership Housing, the Ealing Tenants, Limited, 1901, being the first society entirely doing this. In 1905 a central organising body was formed, called the Co-partnership Housing Council, to encourage and assist the movement which is growing with great rapidity. Tenants contribute a share towards the capital with which land is bought, and well-designed and well-placed houses are built. The rents allow of a return of 5 per cent on share capital and 4 per cent on loan capital. Surplus profits are divided among tenants in proportion to rental, the amounts being credited to each tenant in shares until his share capital equals the value of the house he rents, which then becomes his own, his subsequent share in the profits being paid to him in cash. There are now (1909) twelve societies. The movement is both sound and vigorous and promises to do good work in the future. Its sphere is at present essentially suburban, but it has been proposed by the Select Committee on Rural Housing (see *Reports*) that a Co-partnership Housing Society should be formed in every English county.

The rural employers of labour have, in a large number of cases all over the country, built improved and sanitary cottages for their employés. In many cases this work has been one of pure philanthropy, for it is impossible at the present rates of wages to demand of an agricultural labourer a rent which will remunerate the builder of a model cottage in a genuinely rural district.

A substantial diminution in overcrowding took place between 1891 and 1911, the percentage of overcrowded population having dropped in England and Wales from 11·23 per cent in 1891 to 8·20 per cent in 1911.

[C. Booth, *Life and Labour of the People in London*, 1st Series, vol. 3, 1904.—*Journ. of Stat. Soc.*, 1875, 1891.—Royal Inst. Brit. Archts. *Transactions*, 1866-1875.—*Reports* of Mansion House Council on Dwellings of the Poor.—Bd. of Trade *Reports.—Cost of Living of Working Classes, England*, 1908—*in German Towns*, 1908—*in French Towns*, 1909—*Proceedings of International Housing Congress*, London, 1907.—*New Encyclopædia of Social Reform.*—Dewsnup, *Housing Problem in England.*—Nettlefold, *Practical Housing Reform: —Practical Town Planning.*—Shadwell, *Industrial Efficiency*, ch. xi. "Housing."—*Co-partnership*, and works recommended therein (monthly publication, Bloomsbury Sq., W.C.)] P. W.

DWELLINGS, MODEL, OF WORKING CLASSES IN FRANCE. Need for better housing of the working classes in France was brought to public notice as early as 1851, when many efforts towards improvement began. In 1852 a subvention of 10,000,000 francs (£400,000) was decreed in favour of improvements in workmen's dwellings, *i.e.* 6,000,000 (£240,000) to raising *asiles* at Vincennes and Le Vésinet; 2,000,000 (£80,000) to the construction of seventeen houses in Paris; and 2,000,000 (£80,000) to builders, including £48,000 awarded on conditions in Paris, at the rate of one-third of expenses actually incurred in building. The financial results of this last scheme were unsatisfactory. Napoleon III. built forty-one houses in Paris, and offered them to a workmen's society which should subscribe 100,000 francs (£4000). The *Société co-opérative immobilière* accepted the offer.

In Paris the high cost of land, building materials, and labour rendered improvement difficult. It was stated in 1890, that 6000 francs (say £240) was the lowest sum which a detached workman's residence could cost in Paris. The lowest estimate for contiguous model dwellings was 5000 francs (£200) per house; and, in each case, the rent was fixed at about 8 per cent per annum upon the capital. A group of ten houses, sold at cost price (5500 francs [£220] each) to the *Société des habitations ouvrières de Passy-Auteuil*, was let out upon the Mulhouse system (*v. infra*). Each house contained two rooms, a kitchen, cellar and garden, and could be bought by a twenty years' tenancy at from 450 to 500 francs (£18 to £20) a year. The main difficulties encountered in Paris were the low wages of the workmen concerned, their deficient sanitary education, and want of attachment to a particular residence.

A pioneer effort was that at Mulhouse in the south of Alsace, where was founded in 1853 the *Société mulhousienne des Cités ouvrières*, under the presidency of M. Jean Dollfus. Its shares of 5000 francs (£200) apiece originally numbered sixty, and were held by twelve persons, but were increased to seventy-one divided among twenty holders. 300,000 francs (£12,000) of the subvention above referred to were received from the emperor. Small houses, with separate gardens, were built and offered to tenants at a yearly rent of 8 per cent on the cost price. Share capital might not receive more than 4 per cent. Any surplus after payment of expenses was devoted to works of public utility. The distinguishing feature of the society, however, was its system of sale. By advancing about one-tenth of the cost of the house the tenant became its incipient owner. A yearly rent of about 10 per cent on the cost paid for a period of from 12 to 15 years made him the absolute owner. Interest upon the cost of the house was calculated at 5 per cent, and the same interest was allowed upon all sums paid by the tenant over and above ordinary rent. The amount standing to a tenant's credit was paid over in full in case of his death, removal, etc. The experiment yielded excellent financial and moral results. By 1889, 1124 houses, costing 3,485,275 francs (£139,400), had been built and sold; 4,584,020 francs (£183,360) had been received; sums due amounted to 424,950 francs (£17,000). Rents were always regularly paid. The occupants of the houses exceeded 8000. The rules forbade sub-letting. One family only resided under each roof. And a house once acquired might not, without the directors' sanction, be resold within ten years. The price of a house, originally about 2500 francs (£100), was in 1890 upwards of 5000 francs (£200). The rise was partially explained by the exhaustion of the subvention in the construction of roads, drains, and so forth at an early stage. Such expenses were afterwards thrown upon houses as they were built. Houses were frequently mortgaged by their tenants. At Lille, in 1865, a society very similar to that of Mulhouse was started — the municipality guaranteeing 5 per cent interest on its capital up to 2,000,000 francs (£80,000). Napoleon III. presented 100,000 francs (£4000) to the society. At Havre the Mulhouse system was adopted by a society founded in 1871, capital 200,000 francs (£8000). The municipality voted it a subvention of 25,000 francs (£1000) and, following the example of Lille, offered a guarantee of interest upon capital up to 500,000 francs (£20,000). By 1890 117 houses had been built, and half of them sold

At Orleans a society, founded by two workmen in 1879, had by 1890 built and sold 220 houses, and paid 5 per cent upon its capital, then of 450,000 francs (£9000). At Nancy a society of 200,000 francs (£8000) capital, by the same date built and sold 57 houses, costing from 4500 (£180) to 7000 francs (£280). It is said that this society paid too much for its land. Having paid 5 per cent up to 1884, it then fell to 2½ per cent, and was wound up. At Rouen a society with 200,000 francs capital (£8000) was formed in 1885, and a block of six houses was built to accommodate ninety-five families. Interest on shares was limited to 4 per cent. By 1890 there were seventy tenants in residence, of whom twenty were small employés. The wages of tenants ranged from 600 francs (£24) to 1200 francs (£48) a year. Rents ranged from 87 francs (£3 : 10 : 0) (one room) to 450 francs (£18) (four rooms) a year. These prices compared favourably with those of other lodgings far less comfortable and healthy in the same central quarter. Societies similar to those described were established at St. Quentin, Amiens, Nantes, Lyons, Rheims, and elsewhere (that of Rheims being on a co-operative basis), undertaking the improvement of old dwellings as well as the construction of new. At Lyons, Marseilles, and other towns, savings banks were encouraged to invest their profits in aid of the construction of workmen's houses.

Employers engaging regularly a large number of hands, in many cases supplied their operatives with suitable houses rent free within easy distance of their work. Among others may be named the settlements of Anzin, Beaucourt, Blanzy, Commentry, Le Creusot, Maine, and Noiseul. The experiment of M. Jean Godin at Guise is described under FAMILISTÈRE (*q.v.*).

There is substantial agreement among French writers as to the superiority of suburban cottages over town dwellings.

[Jules Simon, *L'Ouvrière*, Paris, 1861.—*Le Travail*, Paris, 1866.—E. Müller et E. Cacheux, *Les Habitations ouvrières en tous pays*, Paris, 1879.—Marjolin, *Les Causes et les effects des logements insalubres*, Paris, 1881.—Du Mesnil, *L'Habitation du pauvre à Paris*, Paris, 1882.—E. Laurent, *Les Logements insalubres*, Paris, 1882.—G. Picot, *Un Devoir social et les logements d'ouvriers*, Paris, 1885.—E. Cacheux, *Habitations ouvrières et pour employés*, Laval, 1885.—E. Cheysson, *La Question des habitations ouvrières en France et à l'étranger*, Paris, 1886.—A. Delaire, *Les Logements d'ouvriers et le devoir des classes dirigeantes*, Lyons, 1886.—A. Raffalovich, *Le Logement de l'ouvrier et du pauvre*, Paris, 1887.—A. Perrot, *Les Cités ouvrières de Mulhouse* (4th ed.) Mulhouse and Paris, 1889.—E. Rostand, *Questions d'économie sociale dans une grande ville populaire* (*i.e.* Marseilles), Paris, 1889.—*Compte rendu du Congrès international des habitations à bon marché* (*Official Report of the Paris Exhibition*, 1889).—O. Trüdinger, *Die Arbeiterwohnungsfrage*, *Preisschrift* (1889).—Board of Trade *Report*, "Cost of Living in French Towns," 1909.] H. H.

A great advance in the development of the housing of the working classes in France took place in 1894, when a law was passed to promote the building of improved dwellings bearing the name and putting into practice the principles of M. Siegfried, the founder in 1889 of a society called the *Société Française des habitations à bon marché*. More recent laws are the Public Health Act of 1902 and the Housing of the Working Classes Act 1906, followed by regulations drawn up in 1907. The former act empowers municipalities to buy land compulsorily in connection with providing healthy habitations. The act of 1906 established *Comités de patronage* in every department. It provides grants in aid of working-class dwellings and remits certain taxes on those that fulfil certain conditions. Under its auspices housing societies are formed and public bodies, such as savings banks, charitable institutions, etc., are encouraged to invest money in buildings connected with these societies. There are forty-six societies in Paris alone and many in the provinces. The standard of good housing is still lower in France than in England. Single dwellings are far less frequent in France, and there is also a much larger proportion of small tenements, consisting of one to three rooms only, in that country than in England. Rents are generally lower in France than in England. The provision, mentioned above, by large employers, Mining Companies, Railway Companies, and manufacturers, notably MM. Schneider and Creusot, of dwellings for their work-people has made great strides. Their houses are excellently built and arranged and have large gardens.

Housing reform, which meets with great difficulties in Germany owing to the recent great increase in urban population, has been vigorous in both public and private effort, especially during the last twenty years. Space cannot here be given for an account of the work in this or other foreign countries. *See* Board of Trade *Report*, "Cost of Living in German Towns," 1908; *Encyclopædia Britannica*, 11th ed.), vol. 13, "Housing."

DWELLINGS (REGULATIONS BY THE STATE IN ENGLAND). The regulation of dwellings by the state in England is of very modern origin. Down to the nineteenth century the responsibilities of the government in matters of health were ignored or confined to the ideals of individuals. The first impetus to any recognition of such responsibility was given by the poor-law commissioners in their fourth and fifth reports (1838-39), and probably originated with their secretary Mr. Chadwick (afterwards SIR E. CHADWICK). The commissioners utilised the opportunity afforded by a purely financial question to direct inquiries into the "prevalence

of certain physical causes of fever in the metropolis," and also into "some of the physical causes of sickness and mortality to which the poor are particularly exposed." A further report on the sanitary condition of the labouring population of Great Britain, issued by them in 1842, directed attention to "the condition of the residences of the labouring classes where disease is found to be most prevalent," and to "circumstances connected with the internal economy and bad ventilation of places of work, lodging-houses, dwellings, etc." Already in 1840 the subject had attracted the attention of the House of Commons, and a select committee had reported in favour of a general buildings act, a general sewerage act, the establishment of a central board of health, and the appointment of sanitary inspectors in large towns. Legislation on the subject falls under two heads, viz. (I.) to enforce sanitation, and (II.) to facilitate the repair or removal of insanitary buildings.

I. Under this head may be mentioned:—(*a*) Two acts passed by the influence of Lord Shaftesbury in 1857 to control common lodging-houses. Subsequent acts, 1866-67, have placed the control of these houses, usually distinguished by having a common sitting-room, with the police. (*b*) For London, the Nuisances Removal Act of 1855, extended and amended by the Acts of 1866 and of 1876. By the first of these a nuisance is defined to include foul and defective drains and cesspools, accumulations of filth, and overcrowding; information as to such may be given by persons immediately affected, by any two inhabitant householders, or by any official person to the local authority, who is bound to ascertain by inspection the truth of the information, and if satisfied, to call on the person responsible—in cases of structure, the owner—to remove the nuisance. Failure to do so may be met by an order issued by a magistrate, and ultimately by the closing of the house. Under the Act of 1866 the local authority is empowered to make regulations in the case of houses occupied by more than a single family (1) for fixing the number of inmates, (2) for registration, (3) for inspection, (4) for general supervision, (5) for cleansing,—and to inflict penalties in cases of neglect. To these powers the Act of 1874 added similar powers with respect to ventilation, paving, and drainage, separation of the sexes, notification of infectious or contagious disease, which last was made compulsory by the Act of 1889. Further regulations, of a more minute kind, and also as to new buildings, are contained in the Metropolis Management Acts of 1855 and 1862. Whilst the above refer to existing buildings, the erection of new buildings in London is regulated by the Metropolitan Building Acts of 1855 and 1878. (*c*) Outside London the action of the local authority is governed by the Public Health Act of 1875. As in London, the local authority is empowered to make by-laws dealing with houses occupied by more than one family, and also for the notification of disease. It is compelled to appoint medical officers and inspectors of nuisances, to report on the sanitary condition of the district generally. Procedure for dealing with sanitation is still regulated (1911) by these acts and by a Public Health Act (London) 1891, amending and consolidating previous legislation. The work of the authorities includes, besides the details mentioned above, construction, with special attention to the prevention of damp and decay, the cleaning of streets, the removal of house-refuse, the provision of sanitary conveniences, and the water-supply.

II. The early acts designed to provide for the demolition of insanitary buildings are the Torrens' Acts (1868, 1879 and 1882), so called from their promoter, W. T. Torrens, and the Cross Acts (1875, 1879 and 1882) from Viscount Cross. The former apply to single or small groups of houses, while the latter deal with large areas, *i.e.* places with more than 25,000 inhabitants. By the Housing of the Working Classes Act of 1885 the administration of the sanitary acts, hitherto permissive, was made compulsory upon the local authority; all contracts with regard to buildings presupposed a sanitary state; the Cross Acts were extended to every urban sanitary district; the local authority was empowered to build lodging-houses and to make loans to building societies. The Housing of the Working Classes Act 1890, amended in 1894, 1900 and 1903, and the Housing, Town Planning, etc., Act 1909, carry on now (1911) the same principles. By Part i. of the Act of 1890, the local authority may order an inspection of suspected houses, and if necessary, prepare an "improvement scheme" to be laid before the Local Government Board which, in its turn, issues an order, confirmed by special Act of Parliament, to the local authority to destroy the premises after paying compensation. Under Part ii. the local authority can simply serve notices on owners to repair such premises at their own expense, and on failure to comply may issue an order to close them, followed by an order to destroy them if action is delayed for three months. This involves the consideration of re-housing displaced persons, by the purchase of land and raising of loans, dealt with under Part iii. the provisions of which have been since strengthened and in some cases made compulsory, where before only permissive, by the Act of 1909. This Act enforces with greater stringency the regulations for the closing and destruction of insanitary houses. It extends the powers described above to County Councils, and increases those of the local authorities.

[*Repts. of Commission* (1885) *and Committees*

H. C., 1881-82.—H. Duff, *Legal Obligations in respect of Dwellings of the Poor*, 1884.—*What to do and how to do it. Manual of law affecting the Housing and Sanitary Condition of Londoners.*—E. Spencer, *Artizans' and Labourers' Dwellings*, 1881.—D. Schloss, *Homes of the Poor*, 1885.—*Repts. of Mansion House Council on the Dwellings of the Poor*, 1885, *seq.*—C. S. Loch, *Dwellings of the Poor*, 1882.—Rawlinson, *Old Lessons in Sanitary Science revived*, 1883.—Aschrott, *Verein für Socialpolitik*, 1886.—*Dwellings of the Poor*, Rept. of Investigation by Church of Scotland, Glasgow, 1891.—Booth, *Life and Labour of the People in London*, 1st Series, vol. 3.—E. R. Dewsnup, *The Housing Problem in England.*—*Co-partnership*, esp. Jan. and Aug. 1910.] L. R. P.

EAGLE. United States standard gold coin of the value of ten dollars, weight 258 grains, fineness 900, value—English standard (916·6 fine at £3 : 17 : 10½ an ounce) £2 : 1 : 1¼, French standard (900 fine) 51·83 francs. Also double, half, and quarter eagles of the same fineness and of proportionate weight. F. E. A.

EARNEST MONEY. Probably derived from the same root as the word ARLES (*q.v.*), which is used in some English dialects, and can be traced from the Latin word *arrha*, a sum of money paid down on conclusion of a bargain as a security for its due performance. It generally becomes forfeited in case the bargain remains unperformed, but this depends on the arrangement between the parties. The payment of earnest money establishes the validity of a contract for the sale of goods of a value exceeding £10, which might otherwise be void under the statute of frauds (*e.g.* the administration of the estates of deceased persons, the taking of partnership accounts, foreclosure and redemption of mortgages, the execution of trusts, partition actions, guardianship matters, etc.) E. S.

EARNINGS AND INTEREST FUND. This term was employed by Professor and Mrs. Marshall (*Economics of Industry*, bk. ii. ch. vi. § 3, old edition) to denote that part of the "net-income of the country" which remains "after deducting rent and taxes." The share of this income which "the landlord can claim as rent" is, they remarked, "fixed by definite economic laws," and the share taken by the state as taxes is arbitrary in character; and the amount, therefore, "which remains after deducting rent and taxes from the net annual income" may be regarded as a "given fund," and called the "Wages and Profits Fund," or the "Earnings and Interest Fund." The latter expression is preferred because the earnings of management are "similar in nature" to those of other kinds of labour, and "are in the long-run governed by the same laws." It seems therefore better to classify the receipts of the employer (see EMPLOYERS and EMPLOYED). so far as they represent earnings of management, together with other earnings, and to include his receipts, so far as they represent interest on capital, under the same head as interest generally.

[See also Professor Marshall's article on "Theories and Facts about Wages," printed in the *Report of the Industrial Remuneration Conference*, 1887, pp. 186, etc. In his *Principles of Economics*, 2nd ed., bk. vi. ch. ii. § 1, footnote 2, Professor Marshall adduces reasons for withdrawing the expression as being liable to misunderstanding. He would substitute the idea of a stream or flow for that of a fund, and would not "put rent aside," in the way the phrase might suggest.] L. L. P.

EARNINGS OF MANAGEMENT. A technical term for one of the elements of profits, according to classical English economics. Profits, regarded by Mill as the return to capital, are divided by him into three portions: interest insurance for risk, and wages of superintendence, or earnings of management, as they are now more commonly called. They consist of all the profit that is left over after the other two elements have been abstracted; and unfortunately, according to the threefold division, it is impossible in any other way to allocate the share which falls to management. We have an exact criterion of interest on borrowed capital, on first-class security in consols and corporation stocks. Risk generally fixes its own price by means of insurance; but there is no scale or measure for the earnings of management, and in consequence they are held to vary with each individual case, though as a greater profit may be considered as roughly representing a greater quantity of business capacity, the one should roughly measure the other.

The earnings of management, being in reality a payment for skilled labour, are in a proper sense wages; and they appear in the market as such in the countless instances where business supervision is delegated to subordinates. As understood generally, they embrace the great bulk of profits, however. There is thus a difficulty in bringing under the same term the great percentages on capital frequently earned as profits, and the comparatively small salaries attached to the delegated management of business — a difficulty which the admitted superiority of personal supervision is not sufficient to solve. A limited liability company for banking, insurance, or other purposes divides among its shareholders say 8 to 10 per cent. Half of this, at the very least, is earnings of management, according to hypothesis. But it goes to people who do not manage the concern; while, as to those who do, their salaries are fixed by the demand for and supply of

business power, so that the management of the business is paid for at its full price. It would therefore seem that there is still an element in profits, unaccounted for, which cannot properly be held as covered by the term earnings of management.

With this proviso, however, the form of wages may be in general considered as the price accruing to the capitalist for the services he renders in managing his business, and his capacity as being measured and determined by that price. The exercise of this capacity cannot, by any careful method of reasoning, be counted as anything but labour, unless indeed that term be unscientifically restricted to manual labour only,—a labour which is employed to develop a visible and material product. It is, in the highest meaning of the words, skilled labour; and yet it differs in one singular respect from almost every form of work so classified. The skilled workman in general, whether his energy be that of brain or muscle, whether he be mechanic or scientific, artisan, journeyman, lawyer, doctor, or writer, works in a particular industry, within the compass of which his sphere is limited. In a word, his labour is specialised. The work of business management, on the other hand, is as little specialised as anything outside of mere muscular labour-power can be. Professor Marshall gives two reasons for this (*Principles*, 1st ed., vol. i. p. 643): first, that every one has to manage the business of his own life, and secondly, because technical knowledge is becoming in most cases subordinate to the non-specialised faculties of judgment, resource, and the like. It may be suggested that perhaps the cause of the wide scope of business power is that it rests upon just those faculties which underlie all technical or special skill, plus versatility. It would be a great mistake to suppose that this faculty is not a talent in itself, and quite apart from other species of ability. Many men possess qualities which place them in a distinguished position in some sphere of activity, who yet are not fitted to manage any public business, and sometimes show themselves, notwithstanding the universal training above mentioned, singularly unfortunate in the management of their own. No more striking instance of the existence of a special faculty of business power can be found than that of the number of men, eminent in thought and action, who have turned out indifferent or incapable statesmen.

Earnings of management, being in reality a species of wages paid for a particular kind of labour, are regulated by the supply of business capacity in a community, and the demand for managers. It must be noticed, however, that the phrase is commonly used to denote all that remains of profits after rent and interest are deducted. In purely productive industries there may seem to be little distinction between the two; but in retail business the difference is important. In the latter, the gross profit does not principally depend on the amount of capital employed, but on the number of transactions performed; and in these industries, as to a lesser extent in all, the profits proper which accompany success are far in excess of the market value of the business capacity of the capitalist. Used in the wider sense, the phrase covers all the advantage that fortuitous circumstances, monopoly, or other causes in trade may confer on an owner or investor of capital (see CONJUNCTUR; DEARNESS, ARTIFICIAL; MONOPOLY). M. G. D.

EASEMENT. The owner of one piece of land may be allowed to exercise certain rights over another piece of land belonging to a different owner. If these rights consist of the privilege of taking away tangible objects (*e.g.* peat, underwood, fish, etc.), they are called profits; in all other cases they are called easements. The piece of land to which the benefit of an easement attaches is called the "dominant tenement"; the one which is subject to its burden has the name of the "servient tenement." If the owner of the dominant tenement is entitled to use the servient tenement for certain purposes (*e.g.* for the purpose of walking over it or driving cattle over, or taking a drain through it), the easement is called an "affirmative" one; if, on the other hand, the owner of the servient tenement is restrained from exercising his privileges of ownership in certain ways (*e.g.* from erecting buildings which obstruct the lights of the dominant tenement, or from removing buildings so as to take away the support from a wall on the dominant tenement), the easement is called a "negative" one. Easements are acquired (1) by express grant from the owner of the dominant tenement; (2) by implied grant; this arises when part of the property is sold having apparently privileges in the nature of easements relating to another part of the property, *e.g.* when a house is sold enjoying certain lights, in consequence of an adjoining piece of land belonging to the same owner not having been built over, the owner will not after the sale be allowed to erect buildings obstructing such lights; (3) by prescription, *i.e.* by enjoyment for a certain number of years. The subject of easements is treated very fully in the notes to Sury *v.* Pigot, in Tudor's *Leading Cases on Real Property*; see also Gale on *Easements*; Goddard on *Easements* (see PROPERTY, LAW OF). E. S.

EASTERLINGS. This name was given in the middle ages to the German merchants who visited England, and ultimately came to be applied generally to the members of the Hanseatic League. Mediæval law in all countries connected the licence to trade with nationality. The foreigner had no rights, except such as could be acquired by individuals or communities

who could afford to purchase them from the ruler of the country. In order to obtain such trading privileges in England, the German merchants formed themselves into a *hansa* or guild. The original *hansa* in London, which has its origin in the reign of Edgar, was formed by the merchants of Cologne. They continued to have a monopoly of trading privileges until the 13th century, though the natives of other towns had succeeded in gaining admission, and the association had grown to include traders from the Rhine valley and Westphalia. But the rising towns of northern Germany resented the exclusive pretensions of Cologne, and set themselves to break down the monopoly. In 1266 and 1267, Hamburg and Lübeck were allowed to form hansas of their own, on the model of that of Cologne. Under Edward I. these three associations were united into the great German hansa, of which we find the first documentary mention in 1282. The buildings of this corporation on the banks of the Thames, consisting of dwellings and warehouses, were known as the STEELYARD (*Stahlhof*). The corporate property and discipline were administered by an alderman elected annually, with the help of two assistants and a council of nine. For their privileges from the state, the Easterlings contracted for the payment of customs duties, while they discharged their obligations to the city by annual payments to the lord mayor and by maintaining a watch and ward at the Bishop's gate. Originally the hansa was an independent community, but in the course of a long struggle with the jealous and rival native population, it came to rely more and more upon the growing league of towns in North Germany, and ultimately became a "counter" or depot of the HANSEATIC LEAGUE.

Although the Easterlings were traders and left money-dealing in the hands of the Lombards, yet their name came to be applied to money. Probably this was due to the excellent quality and uniform weight of their own coins. Matthew Paris tells us (*sub ann.* 1247), that "moneta esterlingorum, propter sui materiam desiderabilem, detestabili circumcisione cœpit deteriorari et corrumpi." The statutes of Edward I. refer to a definite coin called "sterling," which is thus described: Denarius Angliæ, qui vocatur Sterlingus, rotundus sine tonsura, ponderabit 32 grana frumenti in medio spicæ, et 20 denarii faciunt unciam, et 12 unciæ faciunt libram. From England these coins passed to France, and we find frequent references to them in the middle ages. That the quality of the coins was for the time excellent is proved by the survival of the term sterling, to denote money of standard weight and quality, to the present day.

[Pauli, *Pictures of Old England.*—Kunze, *Hanseakten aus England*, 1275-1412.—Du Cange, *Glossarium*, *s.v.* "Esterlingus."—Helen Zimmern, *Hansa Towns* (Story of the Nations Series).] R. L.

EAST INDIA COMPANY (1600-1858). The circumstances attending the formation and the aims present to the minds of the promoters of the East India Company did not differ materially from those which influenced the foundation of the other "venturer" COMPANIES of the same epoch, from among which it stands out pre-eminent by reason of the magnitude of its operations, and its profound imperial importance. Like them its early attempts were ventures for the sake of quick gains; like them it owed much to the spirit of daring enterprise characteristic of the age. The difference which became so marked afterwards was due to several causes; partly to the larger sphere of its activity; partly to a difference in its management; and partly to certain embarrassments in which it found itself involved through its relations with native powers and the rivalry of continental companies and European nations.

From very early times the East had been viewed as a great source of wealth, and consequently as a great goal of trade. This feeling was accentuated rather than lessened after the Portuguese had discovered and at first monopolised the passage round the Cape of Good Hope. Many schemes of adventure had been formed, and some of them tried. The LEVANT COMPANY had striven, but without much success, to extend its operations overland in the direction of India. On the other hand, attempts had been made to open a north-west passage which should be to the English what the Cape route had been to Portugal. One of these found place in 1591, when a license was granted by Queen Elizabeth to send out three ships. They were sent under Captain Raymond, but without success. But the hope of trade with India was not abandoned; the prospect was too promising. In 1599, no doubt after some preliminary action, the project which was to issue in the formation of the East India Company was first put on a substantial basis. On 22nd September of that year a record was drawn up of the people who had agreed to subscribe to the intended voyage to the East Indies. On 24th September a meeting of the subscribers was held, and in due course a charter was applied for. For a time operations were checked owing to negotiations of the government with the Dutch, but in the autumn of the next year the matter was proceeded with; and on 31st December 1600 a charter was issued to the *Governor and Company of Merchants of London trading to the East Indies.* The charter was drawn on the lines of those previously issued to other companies, from which it differed in no important point.

The history of the company can only be reviewed in its essential features. These cluster chiefly round two points; (1) the mode of conduct of the company; (2) its negotiations with

native powers, and rivalry with other European companies and powers.

(1) The early voyages of this company were like those of certain others, of the nature of separate "ventures," that is, members of the company subscribed in varying proportions towards a certain expedition, the proceeds of which were afterwards distributed among them according to their respective shares. This method endured till 1612, when what was termed the first joint stock was subscribed. This, however, is a term which is likely to lead to misunderstanding. It did *not* imply the formation of a permanent capital divided into shares and distributed among the members of the company in varying proportion. It was little other than a somewhat prolonged series of ventures. Subscriptions were taken up in the most various amounts from members, none of whom were necessarily bound to subscribe, and paid into the hands of the governor and directors, who then applied the money at their discretion for the equipment of a number of expeditions for the benefit of the subscribers. Thus the first joint stock subscribed in 1612 was distributed among four voyages, and came to an end in 1617; the second joint stock, contributed 1617-18, furnished three voyages, and so on. Such a method, while in some respects a decided improvement on that previously pursued, had serious drawbacks. With each succeeding voyage the amount of "dead plant" belonging to the company, in the form of factories in India, etc., was increased; and so the relations of the members of future to those of preceding joint stocks were rendered somewhat complicated.

Meantime the company was experiencing a foretaste of the difficulties and dangers which finally caused it to assume political responsibilities. On the one hand it had to contend with private rivals (INTERLOPERS, *q.v.*) at home; on the other, the rivalry of continental powers and companies[1] threatened its existence in India. So early as 1602 a factory had been founded at Bantam, despite the keen opposition of the Portuguese. As operations extended, new factories were established, notably one at Surat in 1612, and new enmities incurred. The relations with the Mogul were rendered more amicable by the tact and capacity of Sir Thomas Roe. But the Dutch were about to prove the most formidable opponents of the young company. The friction which had arisen owing to various causes, chiefly perhaps to the efforts of the company to establish a trade with the Spice Islands, assumed such serious proportions, that the attempts to bring about a peaceful settlement by the Treaty of Defence made in 1619 proved unavailing, and the opportunity of much future quarrel was given by the massacre of Amboyna. The immediate result was the withdrawal of the English from the neighbourhood of the Malay archipelago. In a few years new efforts were made in the mainland and a factory was established at Armagaon, which growing, absorbed that at Masulipatam. In its time abandoned, it was supplanted by the settlement of Fort St. George (1639-40). The acquisition of this station marked a new step in the progress of territorial aggrandisement. In 1646 grants were made in Bengal, and in 1661 Bombay was ceded to the British Crown as part of the dowry of Catharine of Braganza on her marriage with Charles II. The quarrel with the Dutch had been rendered of less importance than it threatened, through the energetic action of Cromwell, who in the treaty of 1654 had inserted a clause dealing with the demands made on both sides for compensation for injury. To adjust these, a commission of award was appointed and began its sittings 30th August 1654. But owing to events such as these, and in part, no doubt, to the increasing importance of the companies' factories, a more definite territorial aim would seem to have presented itself to the minds of some. It became a matter for consideration whether the company was to be considered one of commerce alone, or one which had other beside trade interests. But yet another point. Assuming that commerce was its chief aim, could its attainment be assured without the acquisition of territory by the company? Such territory would need to be protected. The appointment of Sir Josiah Child as governor in 1686 was without doubt a distinct advance in the direction of this new policy. Again, in 1687, when the question of the grant of charters and commissions was mooted with the king (James II.) and his council, he had agreed that it would be better if such charters and commissions were granted by the court of the company instead of emanating from himself. The company, it should be noticed, had in 1624, supplemented its ordinary judicial authority by the power of punishing its servants by martial law. Matters were such, that further advance was natural, and in 1689-90, instructions were sent from home to the regency of Bombay, as also to Madras, which contained the following noteworthy sentences: "The increase of our revenue is the subject of our care as much as our trade; 'tis that must maintain our force when twenty accidents may interrupt our trade; 'tis that must make us a nation in India; without that we are but as a great number of interlopers, united by His Majesty's royal charter, fit only to trade where no body of power thinks it

[1] The following is a list of the chief foreign companies licensed to trade to East Indies. The Dutch Company, founded 1602. The French Companies; the first founded 1604; the second, 1611; the third, 1615; the fourth by Richelieu, 1642; and the fifth, 1644. In 1719 the French Company of the Indies was established, and lasted till 1796. The first Danish company, 1612, and the second 1670. In 1723 the Ostend Company was established; in 1731 the Swedish Company; and in 1733 the Royal Company of the Philippine Islands.

their interest to prevent us; and upon this account it is, that the wise Dutch, in all their general advices which we have seen, write ten paragraphs concerning their government, their civil and military policy, warfare, and the increase of their revenue, for one paragraph that they write concerning trade."

These words are an open declaration in favour of the new policy. Commerce, if still a main aim, was henceforth to be undertaken on a secure basis of territorial possession and political dominion.

At home, however, the company had found, and were still to find, their exclusive rights questioned and combated. At the outset their progress had been hampered by the grant of a royal license to trade to Cathay, Japan, etc., given to Sir Edward Michelbourne, who had made full use of his opportunities to wring booty from the natives. They had convinced the king (James I.) of the need of maintaining their powers, and had received a renewal of their charter. But a more serious rival menaced them in the next reign. In 1635 a license was granted to an association formed by Sir William Courten. This association, afterwards known as that of the Assada merchants, sent out ships and entered upon commerce to the detriment of the East India Company, both by reason of competition and, as was also alleged, by reason of the bad treatment the natives experienced at the hands of its servants. In answer to the petition of the company, the king (Charles I.), in 1639, promised the withdrawal of the license, but the promise remained unfulfilled. In 1650 a kind of amalgamation took place, and the Assada merchants became members of the company. But in so doing they did not wish to deprive themselves of the right to trade in their own bottoms, in other words, they wished to bring about a return to the earlier principles of separate ventures, in part accordance with which the commerce of the company had been carried on before 1612. In consequence, they appealed to the Protector against the enforcement of the joint-stock trading. The company replied, and in 1654 obtained a decision from the council of state in favour of joint-stock management and exclusive trading.

Such had been the history of the company before its important declaration in 1689. Almost immediately after that events took place in England which nearly brought about its extinction. The arbitrary and severe measures which had marked several of their acts in India had excited the animosity of the House of Commons, already prejudiced against societies not of their own creation. In 1690 a committee reported in favour of the formation of a new company which should be constituted by act of parliament and not derive its authority from royal charter. In accordance with this recommendation, next year the king (William III.) was petitioned by the Commons to dissolve the old company. His apparent neglect of this request does not seem to have aroused much feeling. Not so, however, his renewal, in 1693, of the charter. A declaration was drawn up and passed, asserting the right of all Englishmen to trade to East Indies and elsewhere unless prohibited by act of Parliament, and the king gave way. In 1698 a new association, termed the English Company, was formed (with right of *exclusive* trading after 1701), and the existence of the old company was limited to the three years from date for which they could claim notice. To maintain their control over India, members of the old and now condemned company bought up shares in the new company. During these three years the two companies traded in rivalry, in which the older association, fortified by experience and provided with stations, ships, and stock, had a distinct advantage. As the last year (1701) ran on, the old company not unnaturally showed itself more willing to entertain the idea of a compromise, to which the members of the new company were not averse, and in January 1702 a partial union was effected under the title of "The United Company of Merchants trading to the East Indies." Several causes of difficulty and dispute remained over; but the need of harmonious working was too great to allow of their long continuance; and in 1708, on the arbitration of Lord Godolphin, a complete and final union was brought about.

The early opponents of the company had been overcome; its right as against home competitors was established; a settlement in India obtained. It was an acknowledged political power as well as a trading company.

(2) In this direction it had to progress, for the animosities aroused by its dominion, coupled with the ambition of France, made it impossible for it to exist as it was, one power among many others. It had soon to choose between supremacy or political extinction.

The death of Aurungzebe (1707) and the consequent disruption of the Mogul empire afforded the opportunity, and in part created a necessity for further political action on the part of those European companies whose interests were involved in India. The French under La Bourdonnais initiated a policy of advance, which under the more skilful and more ambitious guidance of Dupleix became a policy of aggression and conquest. They sought to subordinate or expel their rivals, the English, and to establish themselves as a ruling, if not predominant, power in the country. Inaction on the part of the English company was impossible, and ill-prepared though they were, a strenuous resistance was offered to the designs of the French. Under the leadership of Clive the English, too, progressed towards sovereignty, and the battle of Plassey (1757) made them virtual masters of

the Nawab's dominions. Their creature, Meer Jaffier, whom they placed upon the throne, made them a grant of territory in Bengal. A few years after they stepped into the position of what we may term definite individual sovereignty, receiving from the Mogul emperor an acknowledgment of their right to the revenues of the three provinces — Bengal, Behar, and Orissa, which they combined into a presidency of Bengal. Other acquisitions were made in the neighbourhood of their other stations. The French war was a turning point in the history of the East India Company. When it emerged successful, the political ambitions, inchoate till then, had realised themselves in power, destined ultimately to become imperial. The task of its control was in fact too important to be committed to the sole will of a trading company and henceforth governmental interference and supervision begins.

The economic interest of the new period centres chiefly in two subjects—the economic settlement of India, and the successive acts whereby the state drew affairs more and more within its own control.

By the act of 1773 an important change was made in the government of India. Till that date the government of each province had been separate, the direction in each case resting with a council composed of the senior civil members in the company's service. By this enactment alterations were made in certain directions. A governor-general was appointed and a supreme council specially constituted for Bengal. To this governor and council the other presidencies were placed in subordination so far as the making of war and the entering into treaties were concerned. In addition the home government, while recognising for the first time the possession by the company and its servants of administrative functions, provided that everything in the company's correspondence which related to civil or military affairs, which concerned either the government of the country or the administration of the revenue, should be laid before the ministry. In the constitution as thus established, there were three grave defects:—The governor was left dependent on the will of the council; no definite connection was established between the various presidencies; the relations between the ministry and the Indian government were but ill-defined. It was to remedy the two latter of these that the act of 1784, which established the board of control, was passed. This body consisted of six members of the privy council, of whom the chancellor of the exchequer and one of the chief secretaries of state were to form two. But, as in the absence of these two *ex-officio* members the senior of the remaining four was to preside at the board, the chief power was vested in the hands of one man who, under the title of the president of the board of control, performed many of the functions which now fall to the lot of the secretary of state for India. The first defect noticed above was largely remedied by the act (26 Geo. iii. c. 16), which Lord Cornwallis obtained when he took the post of governor-general. By it he and his successors were empowered to override the council in cases of emergency.

To Lord Cornwallis is due the organisation of the young empire. Under his rule British officials became something more than mere collectors of the revenue; under him the outlines of the land system were laid down; and it was owing to him that the administration became so effective and so honest. In 1793 the charter was renewed for another twenty years. Lord Cornwallis had regulated the condition of the country and Lord Wellesley established the preponderance of the British power. His policy, though it was not formally assented to by the company, was necessary for the sake of peace and stability. When he left India the company was established as the great sovereign power. In 1813 the charter was once more renewed. When in 1833 it came up again for renewal changes were made. The power of trade was taken away from the company, despite the protest of those who, still faithful to earlier conceptions, continued to view trading as its main function. A further access of power was granted to the governor-general and the supreme council.

Further progress was made in the direction, both of the acquisition of wholly new territories and of the subordination to active government of the protected or dependent native states. But the rule of the company was about to end after a period of some two and a half centuries from its beginning. The fanatical outburst which swelled into the mutiny aroused a feeling, whether right or wrong cannot be here discussed, that the government of India was too important to be left to the directors, however controlled, of a company originally formed for the purpose of trade, and in 1858 it was formally and finally transferred to the crown.

[Bruce, *Annals of British India.*—Histories by James Mill and others.—Chesney, *Indian Polity.*—Parliamentary Papers and Reports.]

E. C. K. G.

EASTLAND COMPANY (established 1568). This company was an association of the English merchants trading to and from the Baltic. From the wording of their charter it seems that they were formerly called the Dantzig merchants. In 1568 a charter was issued to the traders desirous of associating themselves, granting to them "to enjoy the sole trade through the Sound," into Norway, Sweden, Poland, Lithuania (except Narva, the trade with which was claimed by the Russian Company), Prussia, and also Pomerania, from the river Oder eastward to Dantzig, Elbing, Konigsberg, Ebling,

Braunsberg, also to Copenhagen and Elsinore, and to Finland, Gothland, Bornholm, and Oland. The company thus constituted was a "regulated one," and the members of it were entitled to trade "in their own bottoms." The provisions of the charter were much the same as those laid down in other cases. The various privileges were confirmed in 1629, with the single proviso that the trade in grain between the countries and districts enumerated and England was thenceforth to be free. During the early as well as during the latter portion of its existence, the difficulties encountered by the company were considerable; in particular they found themselves impeded in their passage through the Sound. Thus in 1602 complaints were made with regard to the excessive charges levied on their vessels when passing through; in 1653 they petitioned Cromwell on account of the detention of their ships in Denmark. At home they met with disfavour from the strong and growing feeling against monopolies. But on the whole they received considerable support, an ordinance being passed in their favour in 1647. The privileges so warmly cherished did not long survive the Restoration, for in 1672 it was decreed, firstly, that there should be a free trade to Norway, Denmark, and Sweden; secondly, that any one should be entitled to trade to the other Baltic ports within the limits of the Eastland Company's charter on his joining that company, which, it provided, any trade could do on payment of 40s.

[Macpherson, *Annals;* MS. authorities.]

E. C. K. G.

EATON, Daniel Isaac (1752?-1814), a London bookseller who upheld the cause of freedom of the press, at the cost of eight prosecutions, for the publication of works by Thomas Paine and Pigot, of his own periodical (see below), and of a free-thinking work of doubtful authorship called *Ecce Homo*. Very few of the trials ended in a conviction. His weekly periodical, *Hog's Wash, or Politics for the People*, 1794, dealt, not systematically, with political and social subjects in a violently revolutionary spirit. Rhetorical hatred of kings appears as a set-off to real consideration for the poorer classes. The unequal distribution of wealth was treated as the fundamental mischief; parliamentary reform, peace, the lowering of taxes, especially of duties on necessaries, subscriptions for poor labourers, republican government for the sake of economy, the recognition of the natural equality of men; these are some of the various remedies proposed.

Eaton translated Helvetius's *Law of Nature* and *True Sense and meaning of the System of Nature*, 1810, and Féret's *Preservative against Religious Prejudices*, 1810.

[Howell's *State Trials*, xxii. 753-822; xxiii. 1013-1054; xxxi. 927-958 —*Notes and Queries*, 3rd series, vol. x. 396.—*Dict. Nat. Biog.* xvi. 336.

E. G. P.

EBAUDY DE FRESNE, born (*c.* 1760) at Vesoul, published in 1788 his *Traité d'Agriculture considérée tant en elle même que dans ses rapports avec l'Économie* ("Treatise of Agriculture considered in itself and in its relations with Economy"), 3 vols. 8vo; and presented in 1790 his *Plan de Restauration et de Libération*, based on the former work to the National Assembly of France. According to De Fresne, French agriculture was suffering from the undue extent of corn-growing, and an excessive consumption of fodder in large towns, resulting in a loss of manure. He advocates the extension of pasture lands, and a more developed production of cattle and consumption of meat (instead of bread), but most of the methods he suggests to reach this end are very unpractical. E. Ca.

ECK, Johann (1486-1543), was professor of theology at Ingolstadt, and is best known as the antagonist of Luther; he played also an interesting part in the movement of economic thought. He was among the first, if not indeed the very first, to maintain that a contract to pay a certain percentage for the use of money was not necessarily usurious. His justification he apparently found in the theory of "the triple contract," *contractus trinus*, which had grown up before his time, but which he would appear to have been the first to popularise. A contract of partnership (*societas*), where both partners shared in the risk and gain according as their undertaking prospered, had long been recognised by theologians as lawful. It was argued that as another sort of contract, a contract of insurance, was also in itself free from objection, it was permissible for one partner to contract with the other to receive a less return than he might otherwise fairly expect, on condition that in any case his capital should be restored to him. It would then be equally lawful to add a further contract by which the investor insured himself against the chances of fluctuating dividends by surrendering a further portion of the return he might otherwise look for, in exchange for the promise of a definite annual percentage. By the combination of these three contracts in one—"the triple contract," the investor obtained a security both for the return of his capital and for a certain annual percentage; so that the contract, though still technically one of partnership, was essentially one of loan.

Eck, who before his controversy with Luther had already sought fame as a public disputant, announced himself in 1514 at Ingolstadt as ready to maintain the thesis that merchants might lawfully bind themselves to pay 5 per cent. The Bishop of Eichstätt, as ordinary and chancellor, forbade the disputation; and the university of Mainz, being consulted by its archbishop, gave the opinion that it was inexpedient. Thereupon Eck, assisted with money and letters of recommendation by the great

German financiers the Fuggers, set off for the university of Bologna, and there defended the same proposition with much applause from the jurists. This Bologna disputation excited general attention; it was ironically referred to in the *Litteræ Obscurorum Virorum* as showing that usury was allowed by "theology"; and the humanist Pirkheimer wrote to Eck that now the great merchants dared to say that any bargain was just. About the same time Eck stated a case for the Sorbonne; and although the faculty gave no decision, the opinion of Eck was adopted by the distinguished Scotch divine at Paris, John Major. The subject fell into the background with the appearance of the Lutheran controversy. It is probable that the extremely conservative position taken up at first by the Protestant divines on the question of usury prevented for a time the development of opinion among Catholic theologians in the direction pointed out by Eck. A bull of Sixtus V. in 1586 condemned all contracts for insuring either the capital or a certain rate of profit. But this was explained away; and "the triple contract" was very generally recognised as lawful by Catholic divines and faculties from the beginning of the 17th century.

[Schmoller, *Zur Geschichte der nationalökonomischen Ansichten in Deutschland*, 1861, pp. 127-128.—Janssen, *Geschichte des deutschen Volkes*, 15th ed., 1890, i. p. 444 (where it is urged that Eck was altogether alone; and that he did not defend usury but merely the triple contract, and that only in the case of rich merchants who received money for trading purposes).—Endemann, *Studien in der romanisch-canonistischen Wirthschafts-u. Rechtslehre*, vol. i. 1874, pp. 384-385.—Funk, *Zins u. Wucher*, 1868, pp. 84-86 (where the argument in defence of the triple contract is spoken of as justified by circumstances), and *Geschichte des kirchlichen Zinsverbotes*, 1876, pp. 57-64 (where it is described as mere sophistry).—Ashley, *Economic Hist.*, vol. i. pt. ii.—Th. Wiedemann, *Dr. Johann Eck*, 1865.] W. J. A.

ECONOMIC FREEDOM. This is a term properly signifying a condition in which competition acts without influence from other causes. If used in the same popular sense as free trade, it ought to mean merely freedom from legislative imposts or governmental supervision. In order to meet the requirements of a scientific phrase, however, it must be given a more extended meaning; and include the absence of such determining causes of value as combination, custom, immobility of capital and of labour, etc. Professor Marshall uses the term as generally descriptive of modern industry as compared with the economic condition of the middle ages; and this is a singularly happy definition from a literary point of view. Those influences which are most powerful at the present day in affecting exchange values are styled economic causes, which in reality expresses the fact that competition has a much wider range than it had in past centuries. This is the necessary result of the discoveries and inventions of modern times. The railway, the steamboat, the telegraph, all combined towards the amalgamation, for fixing of prices, of all the markets of the world; the breaking-up of much that was ancient and customary, which went on simultaneously with these innovations, introduced strict contract and commercial principle into every sphere of industry. Education, spread throughout all classes, introduced an equality between contracting parties previously unknown. Economic freedom, however, though correctly applied to describe modern industry in a wide sense, is not properly a scientific term; and if it is so used, it may lead to great confusion. In the first place, there are points in which the industry of to-day is not so free as it was in earlier times; in the matter of wages, for instance, although industry is now, in Great Britain generally, free from legislative interference, it is more liable than ever to interference from combinations, whether of masters or of men; moreover, the very conditions of modern trade cause an interlacing between different branches so intimate that they affect each other in greater measure than at any earlier period. Again, in using such a phrase, we must not forget that the era it applies to has been as yet very brief; and that, though it is an important era to ourselves, it may turn out to be of merely passing value in the progress of a science yet so young as that of economics.

Strictly speaking, economic freedom involves a great deal more than we admit even in industry under present conditions. The repeal of differential duties, which established free trade, is the most prominent sign of the economic tendencies of the age in England; but absolute freedom involves no less the repeal of duties on tea, sugar, wine, etc., and in fact the abolition of all indirect taxation. The absence of all restrictions on the hire and sale of land, and of all regulation of the hours of labour, are essentials to economic freedom in the strict application of the words. Freedom of combination is to most minds a necessary attribute of economic freedom; yet the results of combination are such as to destroy that absolutely unfettered competition which is of the essence of the term. M. G. D.

ECONOMIC GOODS, see GOODS, ECONOMIC.

ECONOMIC HARMONY. A phrase rendered classical by Bastiat, the title of the last of whose works it forms (*Harmonies Économiques*). In this work (chap. x.) may be found the key to the meaning of the term, "the constant approximation of all men towards a level which is always rising—in other terms, improvement and equalisation—in one word, harmony." This sentence, if understood as a precept of action, combining legislative and

social effort, might stand as an expression of the aims of a collectivist or socialist of the present day. But with Bastiat it expressed a doctrine, not a precept; and therefore bears an interpretation diametrically opposed to the theory of the communist. For indeed Bastiat's fundamental principles of harmony he termed property and liberty; and his doctrine of economic harmony is that, under absolutely free exchange of labour and other commodities, and the fullest security of private property, whether in land or other things, the arrangements of providence are such as to continually improve the condition of the human race; and that any disturbance of these fundamental laws retards that improvement. Professor Marshall (*Principles*, 1st ed. vol. i. p. 453) states the doctrine thus: "The maximum satisfaction is generally to be attained by encouraging each individual to spend his own resources in the way which suits him best;" and he follows with some interesting criticisms of the theory, or rather limitations, of its operation. The latter definition, which is a description of what has been termed "enlightened self-interest," scarcely includes all that is involved in the individualist theory of Bastiat; but it is an accurate statement of the principle which underlies it.

The phrase economic harmony represents, in another form, the extreme individual theory, and can hardly be properly called an economic doctrine; it is rather an ethical or utilitarian deduction from economic data. But it is used as a normal rule chiefly to exhibit the limitations to which it is subject. It rests really upon the premiss that it is indifferent to any one except the consumer in what manner wealth is consumed; a position not seriously maintained by any economist, and explicitly opposed to the last of Mill's four classical propositions regarding capital—"a demand for commodities is not a demand for labour." The importance of consumption as a factor in economics has of late years come to be more highly appreciated; and its effect on an idea of maximum satisfaction will be found to modify greatly, if not to destroy as a normal principle, the doctrine of economic harmony.

[See HARMONIES OF ECONOMICS.] M. G. D.

ECONOMIC HISTORY. As to the relation between economic history and economic theory, five views are possible, which may for convenience be given the following brief designations:

(1) "The *no-connection* view." This was the view of those who regarded political economy as a purely deductive science, derived infallibly from a few simple abstract postulates which every reasonable being must necessarily grant. Political economy, in this view, was not only not "greedy of facts"; it could be constructed in absolute disregard of any alleged facts except the assumed postulates. To those who held this view, economic history had no direct interest, any more than heraldry or genealogy.

(2) "The *hand-maid* view." This view, which is but a slight modification of (1), is still very generally current. It is that of those who while believing that "economic laws" are to be obtained by deduction from given assumptions, are interested to find illustrations or confirmations of their conclusions in facts furnished by economic history. If the facts agree with the theory, so much the better for the facts; if not, then they are left alone, and the implication is that the historian is mistaken with regard to them.

(3) "The *corrective* view" is again a modification of the preceding. It grants that economic history may sometimes furnish reason for questioning abstract conclusions, and proposes in that case to re-examine the original postulates, and either to modify them, or, if they are still tenable, to examine into the disturbing influences which have affected the result. This is a position which has been avowedly held by many recent writers, *e.g.* by Cairnes; but there are few examples of the practical application of the implied rule.

(4) "The *concurrent* view" is one appropriate to a period of compromise following upon one of controversy, and it is at present not infrequently expressed. It is that economic history and economic theory have each an interest and importance of their own which will attract students whose bent is in one or other direction; and it leaves to the future the decision of the question what bearing historical work may have on economic method.

(5) Finally "The *supersession* view," which is one often held by what are called "economists of the historical school," teaches that the science of political economy, as it has been created by the classical economists, will ultimately be replaced by, or incorporated in, a science based on historical investigation. Among the writers of this school, again, there are two divergent tendencies. Some think that the political economy of the future will resemble that of the classical school in containing "laws" or brief generalisations concerning rent, wages, profits, interest, etc., but derived wholly or chiefly from induction from observed facts past or present. This view, however, is seldom directly formulated, and may perhaps be said to be due to a certain vagueness of thought as to the character of economic "laws." Others hold that political economy will ultimately be replaced by a doctrine of economic development—a philosophy of economic history; a view which is largely due to the influence of modern conceptions of evolution, and of the organic nature of society (see HISTORICAL SCHOOL and HISTORICAL METHOD). In their view, abstract deductive theory will continue to

be of use, as a *minor* method of investigation, and as a useful preparatory training, but it will no longer dominate the field of economic thought.

[G. Schmoller, on *Die Schriften von Karl Menger u. W. Dilthey zur Methodologie der Staats- und Sozialwissenschaften* in *Zur Litteraturgeschichte der Staats- und Sozialwissenschaften* (1888).—K. Menger, *Methode der Sozialwissenschaft.—Die Irrthümer des Historismus* (1884).—J. N. Keynes, *Scope and Method of Political Economy* (1891), ch. ix., note B.—W. J. Ashley, *Economic History*, vol. i. pt. 1 (1888), preface; and *On the Study of Economic History* in the (Harvard) *Quarterly Journal of Economics* for January 1893.—J. K. Ingram, *History of Political Economy* (1888), ch. vi. These books, especially those of Ingram and Keynes, will guide the reader to the very considerable literature upon the subject.] W. J. A.

ECONOMIC LAW. This phrase has frequently given rise to confusion. Law, in its imperative sense, belongs to no science; properly speaking, it is a term in the art of legislation. Law, in its indicative sense, as a statement of cause and effect, is purely scientific; and when political economy is treated as a positive science, it is in this sense that the phrase is used (see Marshall, *Principles*, introd.). In common parlance, however, an economic law is frequently understood to be something imperative, or at least a statement that a certain course of action is wise or just; and the confusion between the art of legislation based on economic formulæ and the science of economics itself (from which the works even of the classical English economists are not free) has done much to spread this misunderstanding. To break the laws of a science is in one sense impossible, as they are merely generalised statements of fact; yet it is not uncommon to hear it said that a certain course of action will break the laws of political economy; when what is intended to be conveyed is that it will lead to a result different from that expected, and that the laws of economics prove this. Thus it is often said that to regulate the hours of labour, or to introduce differential import duties, is to break economic law; and M. de Laveleye, in his very able effort to include the science of economics in an art of sociology, evidently considers luxury liable to be condemned in a similar manner. (See also his *Elements of Political Economy*, for an account of economics treated as an art with definite moral aims.)

The laws of a science are always in themselves useful as guides to action, merely because of the deductions we draw from them. The objection made to this view of the subject, that such laws are entirely barren and uninstructive, is therefore one which would apply equally to every science. In another form, however, the objection has considerable force. A scientific law presupposes unchanging circumstances; and any alteration in these introduces a new law to vary the relations of cause and effect. In physical science we find uniformity to a far greater extent than in economics. It is this uniformity which has caused the phrase "exact science" to be used; and mathematics, in which the circumstances never change, is the most exact of all sciences. But in economics, where the conditions are dependent, not on the inanimate forces of nature, but on the variations of human feeling, passion, sentiment, and taste, it may well be thought that no generalisation, comprehensive enough to be useful, can be made. The older English economists were aware of this; and to get out of the difficulty they presupposed a state of matters in which mankind is governed by one single passion, viz. the desire for wealth. Happily they never adhered to the limitation they set for themselves; indeed, a science of economics on these lines is as inconceivable as a science of dynamics where every force is neglected excepting that of gravity. The great complexity and variety of circumstance which surround every economic problem are such as to render the enunciation of general laws, on a large scale, barely possible, and if possible barely useful. In consequence of this, few efforts have been made to reduce any economic truths to theorems; nor is it probable that any such theorems will be found of great value. Economic laws are rather expressions of tendencies than actual predictions of cause and effect (see Laws of Political Economy).

[See *Der Gebrauch des Ausdruckes "Gesetz" in der National-Ökonomie*, by J. Bonar, Zeitschrift für Volkswirthschaft, 1892.] M. G. D.

ECONOMIC MAN. This term has been often used to indicate a more or less imaginary being postulated for theoretical purposes by Abstract Political Economy (*q.v.*) Those writers who defend the use of the conception, have regarded it as analogous to the perfectly rigid or perfectly smooth body assumed in theoretical mechanics. Speaking roughly, the economic man is one who in his economic relations is moved only by regard to his own material interests. But in reality there is considerable ambiguity in the use of the term. It can be most clearly understood when applied to the sphere of *contracts*. Thus Dr. Keynes, maintaining in a qualified form the legitimacy of the conception, writes (*Scope and Method of Political Economy*, 1891, p. 121): "Is it not a patent fact that in buying and selling, in agreeing to pay or to accept a certain rate of wages, in letting and hiring, in lending and borrowing, the average man aims at making as good a bargain for himself as he can?" Hence in relation to contract, the notion of the economic man is tolerably clear. He may perhaps be best defined negatively, either as one who is not moved by regard to the interests of the opposite party to the contract; or, more gener-

ally, as one who is not influenced by such motives as class-prejudice, public opinion, resentment, compassion, or personal partiality. When we pass to economic actions outside the sphere of contract, it is not so easy to define the economic man. We may consider first the nature of the objects upon which a man's material resources are expended. So far as economists have treated the problem of demand and consumption on a deductive basis, they have certainly not assumed that the economic man normally or necessarily expends such wealth as he may have acquired only upon objects subserving his individual interests. For example, the family, rather than the individual, is often taken as the unit in economic science. But the economic man may be admitted to determine his expenditure under an indefinite variety of influences, such as philanthropy, love of ostentation, etc. In fact, the deductive economist, in his indifference to the purposes for which wealth in general is desired, cannot rightly be charged with recognising none but egoistic motives to its acquirement. Passing from consumption to production, we have to recognise the universally antagonising principles to the desire of wealth, namely, aversion to labour and to the postponement of enjoyments. These aversions are no doubt of a purely egoistic kind. But, as all economists have recognised their importance, they clearly have not represented the economic man as inspired merely by a desire for accumulation, irrespective of the effort or sacrifice involved. Indeed, they have gone further in differentiating the various motives operating in industry. For, from Adam Smith downwards, they have allowed, not only for aversion to toil in general, but also for various degrees of aversion corresponding to various kinds of employment. But another and somewhat different qualification is necessary in concrete applications of economic doctrine. In the abstract sciences it is frequently convenient to take no account of forces of the nature of friction. Thus there are influences which retard, and perhaps permanently modify, the tendency to equilibrium of supply and demand. These influences are mainly those of custom, habit, and ignorance. For example, a labourer is not, or has not been, easily moved to change his abode or mode of employment, in circumstances in which he would immediately do so if he were deliberately to balance its advantages and disadvantages, including risk of adventure and breach of old associations, etc. Similarly, important limits to the mobility of capital exist. The actions neither of the labourer nor of the capitalist are wholly the result of cool, unimpassioned, and completely informed reason. Economists of all schools have, of course, recognised these facts. But it may specially be noted that the deductive economists of the most declared type have attributed to the working classes a character which is the reverse of economic. An important part of the doctrines of Ricardo and of his followers is based on the tendency of the labouring class to multiply until their resources are reduced to the level of bare subsistence. In this notable case, the chiefs of the deductive school have postulated a particularly uneconomic man.

With respect to the range of application of the conception of the economic man, there are some not unimportant differences of view among the supporters of the abstract method. Bagehot, for example, regards the conception as applicable only to the latest phases of economic development. Mill and Cairnes, on the other hand, hold that the results of the abstract method indicate universally operative *tendencies*, the realisation of which is, more or less, actually interfered with by conflicting forces. A slight modification of this view represents the motives of the purely economic man as manifesting themselves *in the long run*,—on the ground that other and conflicting motives cancel one another when a sufficiently large area is contemplated.

[Mill, *Unsettled Questions of Political Economy*, Essay v.—Cairnes, *Logical Method of Political Economy*, Lecture ii.—Bagehot, *Economic Studies*, Essays i., ii.—Keynes, *Scope and Method of Political Economy*, chs. i., iv., vii.—Sidgwick, *Principles of Political Economy*, Introduction, ch. iii.—Marshall, *Principles of Economics*, 1891, vol. i. pp. 71-81.—Cliffe Leslie, *Essays in Political Economy*, 1888, Essays i., xv.—G. J. Goschen, Address on "Ethics and Economics," to the British Economic Association, *Economic Journ.*, Sept. 1893.]

The idea of a *semi*-economic man, one for whom the advantage of another counts, not indeed for as much as his own, but still for something, is suggested by Prof. Edgeworth in his *Mathematical Psychics*, pt. i. end of § 2. A similar conception is more usefully employed by Prof. Marshall in his consideration of the *compromise benefit* of a monopolist (*Principles*, bk. v. ch. xii.). The whole subject of egoism and sympathy in their economic aspect is well treated by Prof. Pantaleoni in the beginning of his *Principii di Economia pura*. See also Mr. Bonar's discussion of utilitarianism in his *Philosophy and Political Economy*, 1893. W. E. J.

ECONOMICS, for other articles under this heading see POLITICAL ECONOMY.

ECONOMIC SCIENCE AND ECONOMICS. The terms "economy" and "economic" or "economical," are now used chiefly in two meanings, which it is well to distinguish clearly; since, though divergent in their history, they are liable to fusion, and therefore in some degree to confusion.

"Economy" originally meant, in Greek, the management of the affairs of a household, especially the provision and administration of its income. But since both in the acquisition and in the employment of wealth it is

fundamentally important to avoid waste either of labour or of its produce, "economy" in modern languages has come to denote generally the principle of seeking to attain, or the method of attaining, a desired end with the least possible expenditure of means; and the words "economy," "economic," "economical," are often used in this sense, even without any direct relation to the production, distribution, or consumption of wealth. Thus we speak of "economy of force" in a mechanical arrangement without regard to its utility, and of "economy of time" in any employment whether productive of wealth or not.

On the other hand, as there is an obvious analogy between the provision for the needs of a state and the provision for the needs of a household, "political economy," in Greek, came to be recognised as an appropriate term for the financial branch of the art or business of government. It is found in this sense in a treatise translated as Aristotle's in the 13th century; and so, when, in the transition from mediæval to modern history, the question of ways and means obtrusively claimed the attention of statesmen, "political economy" was the name naturally given to that part of the art of government which had for its aim the replenishment of the public treasury, and,—as a means to this,—the enrichment of the community by a provident regulation of industry and trade. And the term retained this meaning till the latter part of the 18th century without perceptible change—except that, towards the end of this period, the enrichment of the people came to be less exclusively regarded from the point of view of public finance, and more sought as a condition of social well-being.

But in the latter part of the 18th century, under the influence primarily of the leading French "Économistes" or "Physiocrats"—Quesnay, De la Rivière, and others—the conception of political economy underwent a fundamental change, in consequence of a fundamental change in the kind of answer which these thinkers gave to the question "how to make a nation wealthy." The Physiocrats proclaimed to France, and through France to the world, that a statesman's true business was not to *make* laws for industry and trade in the hope of increasing wealth; but merely to ascertain and protect from encroachment the simple and immutable laws of nature, under which the production of wealth would regulate itself in the best possible way if governments would abstain from meddling. A view broadly similar to this, but less extreme, and, partly for this reason, more directly influential, was expounded in Adam Smith's *Wealth of Nations*. Instead of showing the statesman how to "provide a plentiful revenue or subsistence for the people"—which was one of the two main objects of political economy, according to the traditional view—Adam Smith aims at showing him how nature, duly left alone, tends in the main to attain this end better than the statesman can attain it by governmental interference. Accordingly, so far as the widespread influence of Adam Smith's teaching went, that branch of the statesman's art which aimed at "providing a plentiful revenue for the people" tended almost—though not altogether—to shrink to the simple maxim of *laisser faire:* leaving in its place a scientific study of the processes by which wealth is produced, distributed, and exchanged, through the spontaneous and partly unconscious division of labour among the members of human society, independently of any governmental interference beyond what is required to exclude violence or fraud. A part, indeed, of the old art of political economy—that which aimed at "supplying the state with a revenue sufficient for the public service"—remained indispensable to the statesman; but it was held that this traditional art required to be renovated by being rationally based on the doctrines of the new-born science just described. It is, then, this scientific study of a department of social activity that most writers on the subject now primarily mean by the term "political economy": such part of the old governmental art so called, as the doctrine of the new science is held to admit, being commonly regarded as "applied political economy." In consequence of this change the adjective "economic," instead of the too cumbrous "politico-economic," has come to denote the matters investigated by the science of political economy, and the propositions and arguments relating to them.

By thinkers and duly-instructed students this distinction between "science" and "art"—between the study of "what is" and the study of "what ought to be"—is usually regarded as simple and clear; and accordingly when such persons speak of the "laws of political economy" they mean not rules by which the process of the social production and distribution of wealth *ought* to be governed, but general relations of co-existence and sequence among phenomena of this class, ascertained by a scientific study of this process as it actually takes place. This distinction, however, has been found difficult to establish in common thought: even well-educated persons still occasionally speak of the "laws of political economy" as being "violated" by the practice of statesmen, trades-unions, and other individuals and bodies. It is partly in order to prevent this confusion that the terms "economic science" and "economics" have recently come more and more into use, as a preferable alternative for political economy, so far as it is the name of a science. As to the scope of this science,—it would be generally agreed that it is a branch of a larger science, dealing with man in his social relations; that it is to an important extent, but not altogether, capable

of being usefully studied in separation from other branches of this science; and that it is mainly concerned with the social aspect—as distinct from the special technical aspect—of such human activities as are directed towards the production, appropriation, and application of the material means of satisfying human desires, so far as such means are capable of being exchanged. It would also be generally agreed that the method of economic science is partly deductive, partly inductive and historico-statistical. But to attempt a more precise determination of its method and scope, and especially of its relation to the art or system of practical rules which should guide the action of governments or private individuals in economic matters, would require us to enter into questions of a highly controversial kind; which will be more conveniently discussed when we come to deal with the older and wider term Political Economy (*q.v.*) H. S.

ECONOMISTES. The narrower term Physiocrats (*q.v.*) is now generally applied to the writers who were known in their own time, and to Adam Smith, Malthus, etc., as the *Économistes*. The chief members of the "sect" were Quesnay, the elder Mirabeau, Mercier de la Rivière, Du Pont de Nemours, Abeille, Baudeau, Rowland, Saint Péravy, Le Trosne.

As to the origin of the name compare Mirabeau (Letter of 20th December 1767 to J. J. Rousseau): "De ma part, je fondai chez moi un dîner et une assemblée tous les mardis. J'y reçus tous les étrangers qui viennent voir le bâton flottant sur l'onde, les magnats qui me viennent voir, et surtout la jeunesse. C'est de ces assemblées, qui ont été fructueuses à l'excès, que nous est venu le nom d'Économistes." Levallois, *J. J. Rousseau, ses amis et ses ennemis*, Paris, 1865, ii. 385.

[For further remarks on the Economistes, see Physiocrats.] H. H.

ÉCU. A French coin, so called from the shield covered with fleurs-de-lis which was stamped upon it. It was originally a gold coin, and was first struck in 1336. But the historic *écu* of the 17th and 18th centuries was a silver coin (*écu blanc*), corresponding to the English "crown," and worth six francs. There was also *petit écu* or *demi-écu*, worth three francs. These coins were in circulation at the beginning of the 19th century. In recent times the term *écu* has been applied to a piece of five francs. R. L.

The gold écu of 1336 was made of pure metal. (See *Traité Historique des Monnoyes de France*, Le Blanc, Paris, 1692.) The silver écu, first struck in 1641, was of silver, 913 fine. (See *Traité des Monnaies d'or et d'argent*, Bonneville, Paris, 1806.) F. E. A.

EDEN, Sir Frederick Morton, Bart. (1766-1809), graduated at Oxford, and was chairman and one of the founders of the Globe Insurance Company. Eden's independent position was favourable to his completing, in the thirty-second year of his age, his principal work, involving much study and expensive research, *The State of the Poor*. This book, called by M'Culloch, "the grand storehouse of information respecting the labouring classes of England," entitles its author to rank with Arthur Young as one of those immediate successors of Adam Smith who best developed the inductive branch of political economy. The importance of facts as a foundation of theory is insisted on in the preface and opening pages of this work (p. xxix and p. 4); "These and many similar questions [relating to the poor laws] cannot, as it seems to me, be fully and satisfactorily answered, unless many minute circumstances are previously stated, which have rarely been sufficiently attended to in the plausible and ingenious but unsolid speculations of several merely theoretic reasoners." Such writers "voluntarily impose upon themselves the task, so much and so justly complained of by the Israelites, of making bricks without straw." "The edifice of political knowledge cannot be reared without its 'hewers of stone' and 'drawers of water.' I am content to work among them." "I have purposely and almost wholly abstained from drawing conclusions from the facts here presented to the public." Fortunately not "wholly." In the first chapter of his second book Eden discourses freely "of national establishments for the maintenance of the poor, and of the English Poor Laws, and of Mr. Pitt's proposed bill for the better relief of the poor." His reflections upon the events and opinions which he records are just and striking: for instance, on the "fathers of the poor," whom Child (*q.v.*) proposed to create, "not only clothed in the garbs, but vested with the powers of papal inquisitors" (p. 188); or, with reference to Henry VIII.'s confiscations, on the danger of reposing confidence in "the most specious promises made by any *reformers by violence*, whether they be overbearing despots like Henry the Eighth, canting Puritans like the parliament and their adherents in the time of our First Charles, or blustering and boastful constitution-mongers like many of the modern revolutionists." Although Eden declares, "I have never wasted that time in polishing a sentence which I thought I could better employ in ascertaining a fact," he enhances by considerable literary attractions the curious and important information which he has collected.

The subjects which Eden principally dealt with are sufficiently indicated by a title which is almost a catalogue: *The State of the Poor, an history of the labouring classes in England from the Conquest to the present period, in which are particularly considered their domestic economy with respect to diet, dress, fuel, and habitation, and the various plans which from time to time have been proposed*

and adopted for the relief of the poor, together with Parochial Reports relative to the administration of Workhouses, and Houses of Industry; the state of Friendly Societies, and other public institutions, in several agricultural, commercial, and manufacturing districts, with a large appendix, ... 1797. A translation of the less detailed parts of this work is published in Duquesnoy's *Recueil de Mémoires sur les Etablissements d'Humanité*, No. 21, 1799; and also separately, 1800. There is an analysis of Eden's work by Cabanis, in the *Mercure Français*, Nos. 29, 30, 32, an. vi. (1798). Eden is also the author of (1) *Porto-Bello, or a Plan for the Improvement of the Port and City of London*, 1798.—(2) *An Estimate of the Number of Inhabitants in Great Britain and Ireland*, 1800, written on the eve of the first census, and estimating, by means of the number of baptisms, the population of Great Britain and Ireland (inclusive of sailors and soldiers) as 10,710,000. (The real number, according to the census, was, in round figures, 14,991,000).—(3) *Eight Letters on the Peace and on the Commerce and Manufactures of Great Britain*, 1802, defending the peace with France, and illustrating the economical position of England by statistics and interesting reflections.—(4) *Address on the Maritime Rights of Great Britain*, 1808 (first edition 1807), commending the orders in council of 1807, and "offering some suggestions on the measures necessary to render the United Kingdom independent of other countries for the most indispensable articles now supplied by foreign commerce." The suggestions comprehend a plan for the encouragement of Anglo-Merino sheep, which the author defends against "Adam Smith, the great enemy of bounties," having regard to "what, on the whole, in pecuniary or political advantage, will be the gain to the country when the measure is carried into full effect." Eden is stated (in Walford's *Insurance Cyclopædia*), to have privately printed a considerable pamphlet *On the Policy and Expediency of granting Insurance Charters*, 1806, to which M'Culloch refers in his *Literature*. There is among the Bentham MSS. (*Brit. Mus. Addit. MSS.*, 31,235) a letter from Eden to Vansittart, containing observations on Bentham's scheme of annuity notes. F. Y. E.

EDGEWORTH, Maria (1767-1849), daughter of R. L. Edgeworth, owing to the great popularity of her moral tales for children, has had considerable influence on the attitude of thought in England regarding economic questions. An intimate friend of Malthus, Richard Jones, and Ricardo, and well acquainted with their works, her writings evince considerable power of applying economic principles successfully in everyday life. Her novels and tales were directly written to inculcate a utilitarian morality, and the virtues which she specially exalts are those assumed to exist in the economic man of abstract theory — intelligence, honesty, love of truth, industry, prudence, and judgment; she excelled in her truthful portraits of the stupid, the wilfully ignorant, the extravagant, and the sentimental, against whom she directed a keen wit and satire, the more deadly because good-humoured. Her books for children dwelt on the pains of idleness and the pleasures of industry, an aspect of the labour question now too little regarded. Her pictures of life among the Irish peasantry and the English working classes contain frequent reference to the lucrative employment of young children; but although she believed that work was pleasurable even when remunerated, and goes so far as to make four orphans under thirteen years of age support themselves (see *Parent's Assistant:—The Orphans*), the children in her stories always seek and receive facilities for educating themselves. Numerous instances of generous and yet discriminating relief of the distressed, to be found both in her fiction and in her life, show her to have been in advance of her time in her views on almsgiving; her stories, *Rosamond* and *Egerton Abbey*, exemplify this. (See also article in *Charity Organisation Review*, Nov. 1889). To the economist the most valuable of her writings are the novels dealing with the relations of landlord and tenant in Ireland. The land agent, middleman, or "journeyman gentleman" is presented in all his aspects, good, bad, and indifferent. *Castle Rackrent* is a delightful history of three generations of Irish spendthrift and absentee landlords, written from the point of view of an old family retainer. The hero of *The Absentee*, whose parents have deserted their Irish estates for London society, travels incognito to inspect the condition and treatment of their tenantry; and the account of his adventures, given by one who had herself acted as land agent on her father's estate and who was entirely free from party spirit, is well worth studying apart from its artistic merits. The nearest approach to definite exposition of economic theories is to be found in *Ennui*, in the criticism of the well-meant actions of an Irish landlord by his Scotch agent. Mr. M'Leod "doubted whether the best way of encouraging the industrious was to give premiums to the idle." "He was told that some Indian Brahmins were so very compassionate that they hired beggars to let fleas feed upon them. He doubted whether it might not be better to let the fleas starve." "He doubted whether long leases alone would make improving tenants." "He doubted whether, if a farm could support but ten people, it were wise to encourage the birth of twenty. It might be doubted whether it were not better for ten to live and be well fed than for twenty to be born and be half starved." "He doubted whether it would not encourage the manufacturers to make bad stuffs and bad linen, since they were sure of a sale and without danger of competition," and "he doubted whether it would not be better for a man to buy shoes if he could buy them cheaper than he could make them." The admirable portrait of King Corny in *Ormond* elicited warm praise from Macaulay.

[Helen Zimmern's *Maria Edgeworth*, 1883. The books for children still widely read are: *Frank, Rosamond, Harry and Lucy, The Parent's Assistant, Moral Tales*, and *Popular Tales*. See also article in *International Journal of Ethics* for April 1892, where the writer has treated this subject at greater length.] C. E. C.

EDMONDS, Thomas Rowe (1803-1889), born at Penzance, educated at Cambridge (B.A., 1826), was actuary of the Legal and General Life Assurance Society from 1832 to 1866. He wrote *Life Tables*, 1832; *Inquiry into the Principles of Population*, 1832; *Laws regulating Human Mortality*, 1866; and contributed many papers on the same subject to the *Lancet*. He also published:—

Practical, Moral, and Political Economy, or the Government, Religion, and Institutions most conducive to Individual Happiness and to National Power, London, 1828, 8vo. ("The social system is the limit towards which all governments tend, and at which they cannot fail to arrive sooner or later," p. 283. The author considers that labourers should work six hours a day, and proposes a tax on marriage.)

[Walford, *Insurance Cyclopædia*, ii. 470-74.—F. Boase, *Modern English Biography*, i. 961.—Marx, *Misère de la Philos.*, pp. 49-50.] H. R. T.

EDUCATION, Economic Aspects of. Trade and industry may be affected by education in two ways. In the first place, their progress may be assisted by *General Education*, which, though developed without any immediate or particular reference to their well-being, must necessarily promote it by quickening the intelligence and calling into play the latent capacities of the people of any country. In the second place, a particular industry will be advanced by means of *Technical Education*, which renders those employed or likely to be employed in any industry more fully acquainted with the nature of its processes and with such branches of general education as may be deemed to have a direct and immediate bearing on these. It is education directed to an end, and a particular end. *General Education*, in its early stages, may be the same for all classes, notwithstanding their differences of calling; in its later or specialised stages it will direct attention to certain cognate branches of study with the view of inducing students to concentrate their powers on the problems presented by these studies. Should these problems coincide with or resemble those involved in the profession or trade they may adopt, they will be additionally benefited. *Technical Education*, on the other hand, will have regard to the special requirements of the profession or trade in which the students in question are, or are likely to be employed. It will be evident that the term *Technical Education*, though usually employed as above, may be expanded so as to include or imply an education more fitly described as specialised education.

General Education.—In order that the advantages of such education may be fully felt it is necessary that it should (1) in its primary stages be national; (2) in its later or specialised stages be open to all those fitted to avail themselves of it. The first of these conditions has been recognised by civilised nations. As a rule it has, so far at least as a certain minimum, been made compulsory. There is overwhelming testimony to the benefits conferred on industry by such a state of things. The second condition is less fully regarded, little provision being made in many countries, among which we must include England, where the higher education is costly. The advantages of a high standard of General Education may be seen from many examples, as for instance the position of America and in some degree that of Germany. England, where in industry the standard of workmanship is high, owes her position to causes somewhat different. She owes much to her political condition, and much also to the free and fair intercourse of life common to her.

Technical Education.—The early recognition of the desirability of such training may be gathered from the evidence before Royal Commissions, etc. (see especially "Royal Commission to inquire into condition of the Handloom Weavers," Parl. Paper, 1841, vol. x.), in which the difference in artistic merit between English and French work is instanced and the demand made for the establishment of schools of design, etc. But England made much less rapid advance in this respect than most of the chief foreign countries, where highly-organised systems of technical instruction have been adopted (see *L'Enseignment Commercial*, par Eugène Leautey). In this country, on the contrary, little was achieved till 1890.

[The "economic value" of the intelligence of the population is borne witness to by all our leading economic authorities. See *e.g.* Marshall, *Principles of Economics*, 1st ed. pp. 264-276.] E. C. K. G.

EDWARDS, Bryan (1743-1800) was born at Westbury. In 1759 he went out to Jamaica to the house of his uncle, a merchant in that island. On his uncle's death he succeeded to the business and other property. His chief interests lay in the West Indies, and though shortly before his death he returned to England and sat in parliament as member for Grampound, he continued to act chiefly in the interest of the West Indies. His principal work is *The History, Civil and Commercial, of the British Colonies in the West Indies*, published in 1793; a third edition of this work appeared in 1807 in an enlarged form, containing a brief autobiography and chapters on the French colonies in the West Indies. These were first published in 1797 as *A Historical Survey of the French Colony in the Island of San Domingo*. The economic importance of the book which

reached a fifth edition in 5 vols. 8vo, in 1819, lies (*a*) in the full and accurate account of the West Indies contained in it; (*b*) in an able and temperate discussion of the slavery question from the point of view of a defender, though not an advocate of it. He considers it impossible to abolish the slave trade, but insists that it should be placed under government regulation, and considers that the importation of a larger number of negresses would bring the trade to a natural end. His arguments in defence of slavery are of the usual type, but he admits that the institution has a tendency to injure the character of the planters.

He also wrote *Thoughts on the Late Proceedings of Government respecting the Trade of the West India Islands with the United States*, 1784; *Speech at a Free Conference between the Council and Assembly of Jamaica on Wilberforce's Proposition concerning the Slave Trade*, 1790; and some other pamphlets on West Indian Questions.

[*British Museum Catalogue.*—*Dictionary of National Biography.*—M'Culloch, *Lit. Pol. Econ.*, p. 92.] C. G. C.

EDWARDS, GEORGE, M.D. (1752-1823). George Edwards took his doctor's degree at Edinburgh in 1772, and practised at Barnard Castle in Durham, and afterwards in London, where he died. Besides a few medical works he published a large number of pamphlets upon social questions, propounding various remedies for the social ills which weighed upon England in the early part of the 19th century. He seems, however, to have been more impressed with the evils than capable of studying them scientifically; and to have been little more than a political visionary. His chief discovery in his own eyes was the invention of the income tax. The British Museum contains about forty pamphlets by him, which are principally devoted to recommending the precepts contained in his larger books.

Their titles are: *The Aggrandisement and National Prosperity of Great Britain*, 1787.—*The Royal and Constitutional Regeneration of Great Britain*, 1787.—*The Practical Means of effectually exonerating the Public Burthens of paying the National Debt, and of raising the Supplies of War without new Taxes*, 1790.—*Effectual Means of providing against Scarcity and High Prices of different Articles of Food*, 1800; *A Plan of an Undertaking . . . for the improvement of Husbandry, etc.*, Newcastle, 1783, 8vo.—*Radical Means of counteracting the present Scarcity and preventing Famine in the Future; including the Proposal of a Maximum founded on a New Principle, etc.*, London, 1801, fol.—*A Plain Practical Plan by which Great Britain may extricate herself from her present Difficulties, etc.*, London, 1808, 4to; with many more of the same kind.

[*Gentlemen's Magazine*, 1823; *Dictionary of National Biography;* Allibone's *Dictionary Brit. and Amer. Authors*, i.] C. G. C.

EFFECTS. This is one of the vague and undefined words which often occur in legal documents, and are a frequent cause of litigation. A gift of the testator's effects in a will, unless restrained by the context, means a gift of the whole of the personal property, and may, if other circumstances favour such an interpretation, include even real estate. The word also occurs in partnership deeds in the combination "estate and effects of the partnership," which has been held to include all the property of the partnership "available for the purpose of discharging the debts and liabilities." (Steuart *v.* Gladstone, 10 Chancery Division 626.) E. S.

EFFECTUAL DEMAND. See DEMAND; DEMAND CURVES.

EFFICIENCY OF LABOUR is the resultant of combined (1) strength, (2) skill, (3) diligence and care on the part of the labourer. The product of his labour is manifestly governed very largely also by the efficiency of the tools he is supplied with, and the efficiency of the superintendents under whom he serves; but these are rather external aids furnished from the side of capital than constituent conditions of efficient labour itself. The most perfect tools are valueless in the hands of the inefficient, whereas the truly efficient workman, according to an eminent practical authority, Mr. Nasmyth, the inventor of the steam hammer, is a man who can always produce his result with the tools that lie to his hand, or, as the same idea is expressed in the curious maxim of another eminent engineer, Maudsley, the criterion of the thorough mechanic is to be able to cut a plank with a gimlet and bore a hole with a saw. The workman who can do as well with bad tools as his neighbour does with good, will accomplish with good tools much more remarkable results; but the secret of his efficiency in both cases lies in the physical, mental, and moral energies of the man's own being.

(1) The first condition of the fit workman is physical vigour—not merely muscular, but general vigour, for as Professor M. Foster observes "the power of doing work hangs not on the muscle alone, but on the heart, the lungs, the nervous system, and indeed the whole body" (*Text-book of Physiology*, p. 845). Nervous energy is of especial moment, because fatigue is much more a nervous than a muscular condition. Professor Foster considers it doubtful whether men ever, even in their severest efforts, draw on more than a portion of the store of energy lodged in their muscles; it is the store of energy in the nerves that gives out. People differ much in their power of sustaining hard and continuous exertion, and in the degree of ardour and "go" they throw into it, and the difference depends on the general conditions of sound physical health, especially on original constitution, more or less

plentiful diet and adequate or inadequate repose. A mountain stock has more grit than the average, even though it has been more poorly fed; and Mr. Jones, one of Mr. Brassey's managers, always preferred mountaineers for railway-making when he could obtain them. English workmen enjoy better fare and shorter hours than other workmen, and they are noted for their physical strength, their endurance, and their rapidity at work. Mr. Brassey found English navvies able to do heavier work, to do more work in the day, and to remain afterwards fresher for an extra spurt if required, than any other navvies in the world. In constructing the Paris and Rouen railway, in which he employed 4000 Englishmen and 6000 Frenchmen, he took great pains to ascertain the relative industrial capacity of the two nations, and he came to the general conclusion that three Englishmen did the work of four Frenchmen. In "shifting" materials the English navvy was found to do twice as much work in the day as the French, though he worked two hours less, and he received twice the wages, and a half-franc more, because he could be counted on for additional speed under pressure; while for the hard work of mining and tunnelling, Mr. Brassey employed none but Englishmen; and even in Italy, where he found the Piedmontese excellent workers—in some respects better than the English—and employed them in tunnelling in dry rock, he still reserved the more arduous labour of tunnelling in clay for English limbs (Brassey, *Work and Wages*, pp. 118, 146). For mere strength Englishmen excel even their better-fed but longer-worked American kinsmen. "When we want physical force combined with skill," says the well-known American ironmaster, Mr. A. Hewitt, "we get Englishmen" (*Trade Union Commission Report*, qu. 6980). In girder rolling he said the Americans were more active and better rollers, but when it came to puddling the heavy bars there were no workmen like the English; and the reason was, what he thought every observer must remark, that the English were superior to the Americans in physical development. Sir I. L. Bell, in a comparison of five American furnaces with those of Cleveland, calculates that the workers in an English furnace, with a shorter working day, move 2400 tons of fuel, ore, and limestone in the week, while the same number of Americans move only 2100 tons (*Iron Trade of United Kingdom*, p. 137). Luxemburg ironstone, again, is not harder to work than Cleveland ironstone, but two Cleveland miners turn out 10½ tons of stone in an eight hours' day, whereas two Luxemburg miners turn out only 10 tons in a twelve hours' one (*ib.* 86). In continental textile mills Mr. Mundella always found five hands doing work that was done in England by three. During the eight hours strike in Melbourne in 1859, it was ascertained for a wager that an English bricklayer laid half as many bricks again in the day as a German. Then in England itself, the well-fed Midland labourer will do twice the work of the ill-fed Dorset hind; whilst the Australians, the best-fed and shortest-worked race of work-people in the world, strike even English eyes for the extraordinary vigour and "go" they put into their work. Lord Brassey praises the "remarkable physique" of the Australian navvy, and Captain Henderson, R.N., said Australian dockers coaled a ship three times as fast as English ones (*Proceedings of Royal Colonial Institute*, xix. 122). More specific proof still exists of the connection between work and feeding. Mr. Brassey often employed agricultural labourers for navvy work, and when they first came they would lie down utterly exhausted about three in the afternoon, but after twelve months of good wages and better diet than they enjoyed before, they became quite fit to do their work without any difficulty. Irishmen in their own country are the poorest of workmen, mainly because of their poor fare. Arthur Young said, in his time. that an Essex labourer at half-a-crown a day was cheaper than a Tipperary labourer at fivepence; and Mr. J. Fox said to the Trade Depression Commission that, though he paid the hands in his Manchester mill 20 per cent higher wages than the hands in his Cork mill, the real cost of the work was the same in both. But when the Irish come over to England and get better diet their working power soon improves; Sir I. L. Bell says, many young Irishmen come to Cleveland ironworks, and though not worth much at first, yet "as soon as their improved style of living permits it," they become equal to any workman in Cleveland, both for ability and will to work. M. Chevalier mentions that when Messrs. Manby and Wilson started their French foundry at Charenton in 1820, they brought over a few of their English hands with them, and found these did far more work than the French labourers. Suspecting the reason to be better nourishment, they took steps to get the French work-people to eat as much meat as the English; and the result was, that in a short time they did nearly as much work as the English too. The effect of shortening hours of labour in improving industrial energy will be treated separately, but even the minor changes in the sanitary conditions of work, effected by the Factory Acts, have caused such a perceptible increase in productive capacity that Dr. J. Watts says Lancashire cotton operatives care far more about being employed in a good mill, with plenty of air and light, than about the exact price per lb. they get for spinning or per piece for weaving, because "they know practically what is the effect of these conditions upon the weekly wages" (*Facts about the Cotton Famine*, p. 44). The same sound

physical conditions which enlarge productive capacity at the time also extend the term of efficient working life.

(2) Skill is a compound of general mental intelligence, special technical culture, and acquired manual dexterity. All work involves head work. The good workman must be a thinking and planning being, and according to his general intelligence will be his share of the supreme industrial qualities of resourcefulness, versatility, and precision. The intelligent man needs a shorter apprenticeship and less superintendence, and is less wasteful of materials, all simply because he understands better than the ignorant man the nature of the stuff he handles, the working of the tools and machinery he uses, and the end and object of the commodity he is making. Hence the immense industrial value of general education. The want of education has hitherto been the chief industrial defect of the English workman. Escher, a Swiss manufacturer, who employed about 2000 hands of all nationalities, said, in 1840, that while the English workmen were the best in what they had actually learnt, they were of less value outside their own specific work than the Swiss or the Scotch, because of their inferior education (Mill, *Political Economy*, bk. i. ch. vii. § 5). But on the other hand, a later Swiss manufacturer, Herr Wunderley, who also employed men of all European nationalities in his mills, stated to the Technical Instruction Commission that there was a certain practicality and method in English labour—a mechanical genius, he termed it—which seemed to enable it to do, without much knowledge, what continental labour did with it (*Technical Instruction Commission Report*, p. 269). Mr. Mundella, too, thinks that English labourers naturally more inventive than foreigners, more apt in devising means for ends, but this is probably due in some degree to their greater physical energy, their greater determination not to be mastered by a difficulty; for Mr. E. Rose, in 1832, stated one of the chief differences between French and English work-people to be that the French got much sooner bewildered with a difficulty and gave in, while the English still kept on trying to find a way out until the thing was done (Senior, *Political Economy*, p. 150). But all are agreed that this and other industrial capacities would be greatly developed by better education. Mr. E. Peshine Smith states that the Massachusetts Board of Education procured from the owners of factories in that state, some fifty years ago, a report of the different rates of wages paid and the education of the recipients, and the amount of wages varied exactly as the education, the lowest being foreigners who signed their name with a mark, and the highest the girls who went to school in winter and worked in the mills in summer. He adds that it was estimated that popular education gave an advantage of 20 per cent to the American manufacturer in competition with foreigners (*Manual of Political Economy*, 151). American manufacturers used to say that, from their better education, two American mill hands would do the work of three English ones, and Mr. Harris Gastrell, in his report to the English Foreign Office in 1873, admits that this may be so still in the mills—now apparently a minority—where American has not been superseded by foreign labour (p. 682). Sir W. Fairbairn said, that for difficult engineering work they always looked out for the best-educated workmen; and when Mr. Mundella asked a Swiss manufacturer how his countrymen had taken the ribbon trade from the French, he was answered, "We beat them by means of an educated people."

Special dexterities are, generally speaking, the result of special training and practice. No doubt cunning of hand may be inherited like other faculties, but even then greater facility still comes from repetition. This is the source of the increment of production obtained through division of labour. The jack-of-all-trades never has the chance of becoming master of any; but when every man confines himself to a separate trade, the sum of their total work is improved, both in quality and quantity, through the greater perfection each man acquires in the performance of his special branch of work by means of constant repetition. On the other hand, an extreme sub-division of labour may involve a certain monotony which is not favourable to efficiency even in the special branch of work concerned, and is certainly adverse to general efficiency. Marx, however, exaggerates the ill effects of specialisation when he calls the modern "detail workman" a mutilated and crippled monstrosity, a mere bit of the machine he sits and watches. Mr. Nasmyth, with much more practical experience, says he has often been struck to observe how this process of watching the beautiful and precise working of machinery exercised a positively intellectualising effect upon the labourer which was not unfavourable to versatility. Another essential for good work, hardly behind manual facility, is visual accuracy, and Mr. Nasmyth thinks the average workman comes far short in this quality; he found that his own men in general spent most of their time in applying the rule and straightedge, while the dexterous workman seldom used these tools at all; his eye was enough.

Intermediate between this cunning of eye and hand, and general mental intelligence, stand certain special mental capacities, such as artistic taste and mastery of sciences cognate to the workman's trade, which are of great importance for good work, though some authorities contend they are less the concern of the manual labourer who executes the work than of the designers and

managers who direct it. The French have long excelled all other nations in taste, and the Germans have pushed to the front in some industries through their better technical and scientific instruction.

(3) Diligence and care are the moral virtues of labour, and in the national distribution of industrial qualities they are the portion of the Germans. The English, as Defoe said, are the most diligent-lazy people in the world, very strenuous in their work while they are at it, but prone to breaks of idleness after pay-days, or at other times, for purposes of dissipation. This is, of course, a great advance in diligence over the uniform sluggishness and aversion to labour of many inferior races, but it stands much below the diligence of the Germans, who are not only steady and docile in general, but have a conscientiousness and power of taking pains which alone render them, says Sir C. W. Siemens, preferable to other work-people for many special kinds of work. No race is incurably indolent. The Scotch in the 18th century were counted the laziest people in the United Kingdom, and in the 19th century the most industrious. The Irish are still thought idle in Ireland and found active out of it. The diligence is always due to circumstances, to a change from conditions in which nothing was to be made by working to conditions in which present work is seen establishing future comfort, and is made pleasant and cheerful by the hope so inspired. The great encourager of willing industry is good wages. It is an old contention — which was already successfully refuted with a considerable induction of facts by Adam Smith (*Wealth of Nations*, bk. i. ch. viii.)—that good wages only make men indolent, enabling them to supply their wants with so much less labour; and Professor Cairnes (*Some Leading Principles of Pol. Econ.*, p. 240) has made a kindred objection, that good wages are a bad thing, because they always encourage dissipation; but both these objections err by drawing an unwarrantable conclusion as to the general operation of good wages from the experience of their operation in particular instances only. The countries of the highest wages are also the countries of the highest productivity; and while wages have been generally rising for half a century, drunkenness has been lessening. J. R.

EFFICIENCY OF MONEY. This term is proposed by Mill to express "the average number of purchases made by each piece in order to effect a given pecuniary amount of transactions." According to the "quantity theory," in that rudimentary form which makes abstraction of *Credit*, the value of money will be inversely proportional to the quantity multiplied by the efficiency thereof. This proposition is not true of the *rapidity* of circulation, when defined, *e.g.* by Roscher, as the number of purchases made by each piece per *year* (or other unit of *time*); unless indeed the total amount of transactions is regarded as constant.

A wider definition of "efficiency" covers the circulation of *instruments of credit* as well as coins. Thus Mill: "as money tells upon prices not simply in proportion to its amount, but to its amount multiplied by the number of times it changes hands, so also does credit." Mr. Macleod has in view this wider sense when he introduces the happy phrase "*duty*" of money (*Economic Philosophy*, i. p. 211).

There is reason to believe that the efficiency of money in both these senses varies from time to time. Mill says (*Pol. Econ.*, bk. iii. ch. xii. § 3), "the money of the community is virtually increased in a time of speculative activity . . . by increased rapidity of circulation." So Walker (*Pol. Econ.*, art. 174), "the rapidity of circulation varies from day to day with the state of trade and the temper of the public mind." But precise observations of the extent of variation are wanting. "On that subject there are no statistics," says Prof. Marshall (*Evidence before the Royal Commission on Recent Changes in the value of Silver and Gold*).

Much the same may be said of efficiency in a third sense in which the term is sometimes used, namely, to denote the amount of pecuniary transactions which a given quantity of the metallic standard either effects directly by hard cash payments, or supports and renders possible by acting as a *reserve*. We may say that the efficiency of money in this sense is greater in one country (*e.g.* England) than another; but an accurate measure is not to be expected; for even if we could ascertain (1) the total amount of metallic money, whether in active circulation, or in reserve, and also the "efficiency" (in the first sense of the term) of that part which is in active circulation; and (2) the total volume of things on sale; we should still require to know the average number of times each of these things changes hands during the year, the rapidity of the circulation of goods, and, as Prof. Marshall says (*loc. cit.*), "with regard to that we have no statistics whatever; indeed there has never been any attempt to obtain statistics on the subject."

[Mill, *Political Economy*, bk. iii. ch. viii. § 3, ch. xii. §§ 3, 4.—Walker, *Political Economy*, art. 174.—*Money*, p. 62.—Roscher, *System of Political Economy*, § 123, and authorities there cited.—H. D. Macleod, *Economic Philosophy*, i. p. 211.

On the statistical aspect of the subject some hints may be obtained from the following: *On Currency*, anonymous, attributed to Sir J. W. Lubbock, London (Charles Knight and Co.), 1840 (included by Jevons in his list of Mathematico-Economic books).—Dr. Franz Kral, *Geldwert und Preisbewegung* (Staatswissenschaftliche Studien, Dr. L. Elster).] See RAPIDITY OF CIRCULATION.

F. Y. E.

EGOISM. This term may be said to have a popular and also a philosophic meaning. In

popular usage it is nearly equivalent to selfishness, and expresses the temper of mind which sacrifices to one's own welfare the welfare of others. Economists have often been accused of assuming that all men are egoists in this sense, and of giving practical precepts in conformity with this assumption. In philosophic usage egoism has a more subtle meaning. Egoistic psychology finds the only possible motive of action in the desire to attain pleasure and to avoid pain, although it allows that this desire may often prompt to actions which in ordinary parlance would be called unselfish. Egoistic ethics, taking its premisses from egoistic psychology, defines morality as the intelligent pursuit of that which instinct compels us to pursue, as the rational pursuit of pleasure and avoidance of pain, although it tries to show that such morality is compatible with what is commonly known as unselfishness. The founders of modern political economy have often been censured for assuming the truth of egoistic psychology and the validity of egoistic ethics. This charge is quite distinct from the other charge, although the two are commonly confused. The first has excited most odium. The second is more difficult to disprove. No distinguished economist has said that men all are and ought to be selfish. But many distinguished economists have held that self-love is the mainspring of human action.

Adam Smith's view respecting the influence of self-love on economic action is most plainly stated in his account of the principle which gives occasion to the division of labour (*Wealth of Nations*, bk. i. ch. ii.): "Man has almost constant occasion for the help of his brethren, and it is in vain for him to expect it from their benevolence only. He will be more likely to prevail if he can interest their self-love in his favour and show them that it is for their own advantage to do for him what he requires of them. . . . It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest. We address ourselves not to their humanity, but to their self-love; and never talk to them of our own necessities, but of their advantages. Nobody but a beggar chooses to depend chiefly upon the benevolence of his fellow-citizens." At first sight this passage seems to assert that selfishness is the only economic motive. But on further consideration it will appear that the operation of self-love here described is not of that injurious kind which would commonly be considered selfish. Tradesmen who undertook to supply everything gratis would be far less useful to society than tradesmen who expect a fair price for their goods. Such an expectation is not selfish in the popular sense of the term. It is only conformable to common sense. Similarly, when Adam Smith recommended complete economic liberty and trusted to self-love to generate the best economic system, he did not mean to preach selfishness in the popular sense. The self-love to which he trusted was self-love restrained by the criminal and civil law, by public opinion, by conscience, and by social and amiable instincts. With his sentiments we may compare those of Malthus expressed in the Appendix to his *Essay on Population*: "The great Author of nature . . . by making the passion of self-love beyond comparison stronger than the passion of benevolence, has at once impelled us to that line of conduct which is essential to the preservation of the human race. . . . He has enjoined every man to pursue as his primary object his own safety and happiness and the safety and happiness of those immediately connected with him. . . . By this wise provision the most ignorant are led to promote the general happiness, an end which they would have totally failed to attain if the moving principle of their conduct had been benevolence. Benevolence indeed as the great and constant source of action would require the most perfect knowledge of causes and effects, and therefore can only be the attribute of the Deity."

Here self-love is not only stated as the actual, but justified as the best, motive of ordinary human action. Yet the self-love here justified is not selfishness commonly so called. Thus it includes "those immediately connected with" oneself, *i.e.* one's family. Again the benevolence here disparaged seems confined to the desire of doing good directly to others. The scope of such benevolence must always be narrow for most men. In ninety-nine cases out of a hundred the greatest service which a plain man can render to society is to do his own work well. His work will doubtless be ennobled by his perceiving that it has a value for society as well as for himself. But if he were to forsake it and devote himself entirely to works of charity he would be less useful than in his old calling. Malthus felt that he had laid himself open to misinterpretation, for he adds in a note: "It seems proper to make a decided distinction between self-love and selfishness, between that passion which under proper regulations is the source of all honourable industry and of all the necessaries and conveniences of life, and the same passion pushed to excess when it becomes useless and disgusting and consequently vicious."

These quotations do not justify the inference that Adam Smith and his successors alleged that mankind universally were or ought to be selfish in the plain sense of that term. "This opinion may be dismissed at once as a popular error which finds no support in the teaching or practice of the best economists" (Marshall, *Principles of Economics*, bk. i. ch. vi., "Economic Motives.") But the above quotations do show

that the founders of modern political economy accepted an egoistic psychology and an egoistic ethics. In other words, they took for granted the current philosophy of their day. That philosophy regarded man simply as a subject of pleasure and pain, and defined morality as the line of conduct which led to happiness. The motive of duty to one's fellows was found in the gratification of the social instinct. Human shortcomings were made good by the over-ruling benevolence of God or of nature which led every man to promote the good of others even when thinking solely of his own. It may well be that such a philosophy is inadequate or even corrupting; but it is unfair to blame an economist for accepting the philosophy current in his own day. With the ultimate solution of psychological or ethical problems an economist has nothing to do. As a man of science he has only to estimate the motives which actuate men in producing, distributing, and consuming wealth. As an adviser of individuals or of states, he has only to take for granted the highest morality known to his age.

Egoism or selfishness in the popular sense is perhaps more conspicuous in the economical sphere than in any other sphere of human activity. Yet even here it affords no universal key. "Ethical forces," says Prof. Marshall in the preface to his *Principles of Economics*, "are among those of which the economist has to take account. Attempts have indeed been made to construct an abstract science with regard to the actions of an 'economic man,' who is under no ethical influences, and who pursues pecuniary gain warily and energetically, but mechanically and selfishly. But they have not been successful, nor even thoroughly carried out. For they have never really treated the economic man as perfectly selfish; no one could be relied on better to endure toil and sacrifice with the unselfish desire to make provision for his family; and his normal motives have always been tacitly assumed to include the family affections. But if they include these, why should they not include all other altruistic motives, the action of which is so far uniform in any class at any time or place that it can be reduced to general rule? There seems to be no reason." And in the chapter on economic motives above referred to, Prof. Marshall points out that it is the measurable, not the selfish character of motives, which brings them within the range of economic inquiry. Of course the motives thus measurable are not simple but highly complex. We may be able to measure, *e.g.* the force of the complex motive which leads a particular class in a particular country to spend money on the education of their children. But we cannot measure, nor for economical purposes is it necessary to measure, the relative importance of the elements in this complex motive, such as desire for the worldly advancement of one's children, desire for their spiritual perfection, etc. Nor need we determine how far each particular motive approaches to pure selfishness or pure unselfishness.

In giving practical advice the economist must equally take account of ethics. It will be useless or mischievous to give advice which the common conscience of mankind declares to be immoral; and equally useless or mischievous to give advice which assumes that great masses of human beings are exempt from human weakness. In estimating the force of egoism under actual conditions, and the possibility of controlling it to higher issues, the economist will be guided aright only by a sagacity which is the gift of nature, although it may be improved by study. It would not be hard to show that even so well-informed a writer as Mill thought contemporary men more selfish than they are, and expected men in the future to be less selfish than they are likely to prove.

[See Goschen in *Econ. Journ.*, Sept. 1893, and ECONOMIC MAN.] F. C. M.

EGRON, ADRIEN CÉSAR, born in Tours, was a printer and publisher in Paris (fl. first half of 19th cent.). He printed in 1844 his *Livre de l'Ouvrier; ses devoirs envers la Société, la famille, et lui-même* and in 1847 his *Livre du Pauvre; devoirs de celui qui donne et de celui qui reçoit*. Both works consist mainly of a series of extracts out of different writers from the Bible and Aristophanes to modern times, illustrating the duties of the rich and of the poor respectively. These are connected by rather prolix considerations of his own. He is much more a Christian moralist than an economist. E. Ca.

EIGHT-PIECE (or piece-of-eight). A Spanish silver coin of the value of eight reals, was for many years known as a "piece-of-eight" throughout the British, American, and West Indian colonies, where it was the principal coin in use from the time of the foundation of those colonies until the early part of the 19th century. It circulated in the United States until as late as the year 1857, when it was withdrawn from circulation in that country and demonetised. Pieces-of-eight were also to be found in circulation in New South Wales during the early years of that colony's existence; and they are still used in some of the islands of the East Indian archipelago. The title "piece-of-eight" fell into disuse about the end of the 17th century, when the coin began to be known as the "Spanish" or "hard" dollar (see DOLLAR, HARD). F. E. A.

EIGHT HOURS MOVEMENT. An agitation for a universal eight hours day of labour—for eight hours work without diminution of pay—was begun in England as far back as 1833, by two large employers, John Fielden, M.P., and Robert Owen, and a special or-

ganisation, the National Regeneration Society, as it was termed, was formed to carry on the agitation, but it led to no results, and the question was not practically raised in this country again till the present energetic movement sprang up here and on the continent simultaneously about the year 1887. Meanwhile a successful beginning had been made with the eight hours movement by the working class in Victoria in 1856, in New South Wales in 1863, and in the United States in 1866, and under the same general influences which brought the question up in Europe, this Australian movement took a fresh start in 1884, and the American in 1886. Of the fifty-two trades of Melbourne which, by 1892, enjoyed the eight hours day, thirty-two obtained it since 1884. In the United States, where the agitation died away altogether after the industrial depression of 1873, in which its previous gains were all lost, the struggle was renewed every spring with a great campaign of strikes, and the eight hours day spread among the more powerful trades.

A special plea for the eight hours' day is set up on behalf of certain exceptional trades on account of their dangerous, unhealthy, or exhausting character, but with respect to the mass of ordinary occupations the demand is usually based on one or other of two different and indeed opposite grounds. The advocates of one section base it on the necessity of the eight hours day for realising the recognised claim of modern workpeople to reasonable leisure for the culture, enjoyments, and duties of life, and on the small cost, if any, at which the claim can, in their view, be realised, inasmuch as experience seems to justify the expectation that the personal efficiency of labour would be so much improved under an eight-hours system that the rate of individual production would remain as high as before. Another section plead for the eight hours day because they believe it will result in the contrary alternative of a general diminution of individual production, and they think it will prove, on that account, a sure means of increasing the demand for labour, thinning the ranks of the unemployed, and raising the general rate of wages. The latter plea, though apparently the most prominent and influential in the present movement, is unsolid, going against the possibilities of the case in its view of the effect of a general diminution of individual production, and against its probabilities in its view of the effects of a general eight hours day. On the former point it is admitted, by those who use this plea with discrimination (cp. Webb and Cox, *Eight Hours Day*, p. 107), that if a general diminution of individual production involved a corresponding diminution of the aggregate production of the country, it would necessarily cause a fall instead of a rise in the demand for labour, because the amount of work which society requires done at any given time depends strictly on the extent of the produce of society at that time. But they contend that the aggregate production of the country will not be diminished, inasmuch as any shortcomings will be made up by the work of those who are at present unable to obtain employment at all. They seem to believe it possible to make work for the unemployed by means of capital that only comes into existence as the product of the work it is supposed to make, but if they can do that under an eight hours system, why cannot they do it now?

As a matter of experience the eight hours day has surprisingly little effect on the numbers of the unemployed. In Victoria, for example, where three-fourths of the population now work only eight hours a day, the unemployed are strangely enough a greater and more constant trouble than they are here, and, stranger still, they seem to have become even a greater trouble since the eight hours day became general some years ago than they were before. Whatever are the causes of this redundancy, the eight hours day has had little influence to check them; and the reason of this is twofold. First, shortening the hours of labour has no possible effect on the ordinary causes of fluctuations of employment, bad harvests, injudicious speculations, wars, bad weather, sudden changes of fashion, etc.; and second, shortening the hours of labour involves no corresponding shortening of the product of labour, because it enables the labourer very largely, in many cases completely, to recover by the greater intensity and energy of his work what he loses by its shorter duration.

The degree of this recovery naturally differs in different occupations, but we have now had extensive experience of the eight hours day, and the results of that experience show (1) that there are extremely few occupations in which no recuperation at all takes place, but the diminution of work has been exactly proportional to the diminution of time of work; and (2) that in the majority of trades in which the experiment has been tried, the recuperation has been, not partial merely, but complete. Nay, in a number of cases there has been a positive increase of product. Mr. W. Allan, Scotia Engine Works, Sunderland, for example, found the labour cost of his engines to have become slightly less. Mr. Beaufoy, M.P., vinegar and jam manufacturer, gets more work done in the year, and without any overtime, than he ever got done even with some months' overtime before, and he did not employ a single additional hand except three or four gate-keepers. The South Yorkshire miners had their hours reduced in 1858 from twelve to eight, and turned out much more in the short day than they did in the long one. The men in some of the depart-

ments of the Springfield Armoury, U.S.A., were found in 1868 to have done considerably more work in eight hours than they used to do in ten; and in the other departments the old rate of production, though not similarly exceeded, was fully maintained. The same result of a full maintenance of the old rate of production is reported of many other eight hour experiments in trades so various as iron shipbuilding, chemical manufacture, engineering, glass-making, cabinet-making, printing, masonwork, cutlery, soda manufacture, typefounding. There is more than one instance of this occurring even in cotton-spinning, when the mills were working slack time. The reason is in all cases the same; less lost time and more physical energy. While the period of nominal work is shortened, the period of effective work is really lengthened. The large number of the trades in which the eight hours day has been already introduced without interfering with the amount of production certainly suggests the probability of its similarly successful introduction into most other productive trades. The London gas-workers, indeed, did not maintain their production, but then the reduction in their hours was very great, from twelve to eight, and as it was, their product per hour was so much improved that, though their hours were shortened by a third, they did in one of the gasworks one-sixth, in another one-seventh, and in a third only one-twelfth less work. There are other trades, like gate-keeping, and perhaps certain branches of tram and railway service, in which the work is not susceptible of compression into shorter time, but they are not numerous. And it is worthy of notice that the Huddersfield Tramways, on substituting two eight hours shifts for one fourteen hours day, did not require twice as many conductors and drivers as before, but only half as many again. Under all these circumstances the very current expectation that the eight hours day will do anything considerable in thinning the number of the unemployed is illusory, and the true hope of the movement lies in the probability—the very great probability—that the eight hours day may be generally introduced without in any way impairing production, and therefore without in any way either lowering the rate of wages or lessening the competing capacity of the nation.

Those who believe in this probability will not be greatly concerned whether the eight hours day is to come by trade-union agency or by legislative enactment, the aspect of the question on which opinion in this country is chiefly divided. There cannot be said to be two opinions about the desirability of the eight hours day in itself; for experience of previous shortening of hours justifies the expectation that the leisure will be a much more abundant source of good than of ill to the working classes; but even among these classes themselves there is a strong, though declining, opposition to obtaining it by compulsory legislation. Unconditional compulsion, indeed, is not contemplated by any one, except in the case of certain special trades, such as mining and baking, which are alleged, rightly or wrongly, to be more dangerous or unhealthy than the rest; what is commonly demanded by the advocates of legislation is an eight hours law conditioned by trade option in some form: either (1) in the form of making the law enforceable only on such trades as petition for it by a clear majority of their members (or of their organised members) in the whole country; or (2) in the form, carried by decisive votes in the trade-union congresses of 1891 and 1892, and known as the trade exemption principle, of making the law enforceable on all trades which do not petition by a majority of their members (or of their organised members) to be exempted from its operation; or (3) in the form—commended by Mr. Gladstone in 1892, and known as the local trade option principle—of giving the right of option or exemption to the majority of each trade in each district. These limitations proceed from a general recognition that an eight hours day cannot be equally practicable or suitable for all the twelve thousand different occupations of England, and that any law fixing the hours of ordinary adult labour must be applied with considerable elasticity in accordance with the desires and circumstances of diverse trades. But legislative interference is alleged to be necessary in order to enable trades to get what they desire, inasmuch as under present conditions, though a majority of adult labourers in a trade might want an eight hours day, they could always be prevented from obtaining it as long as a minority were willing to work longer, and the interference is accordingly represented as really promoting instead of infringing the freedom of adult labour.

On the other hand, the opponents of eight hours legislation contend that it makes a prejudicial inroad on the freedom and independence of the labourer, that it will prove disastrous to production and trade, and that in any case it is unnecessary since trade-union agency will answer the purpose more safely and more effectually. Trade-union agency has certainly proved sufficient in Victoria. Of the fifty-two eight hours trades of Melbourne, not one got the eight hours by law, and though the miners in other districts have had an eight hours act since 1883, many of them had the eight hours day long before. A factory act, restricting women's hours to eight, has existed in that colony since 1874; but in accordance with one of its clauses, its operation has been very generally suspended by the minister at the request of the workers; and though the number of suspensions is now diminishing, the enforcement of

the eight hours day in the factories depends more really on opinion than on the law. On the other hand, many eight hours laws were passed in the United States in the first heat of the movement, but they have for a long time past been inoperative, and all recent gains have been won by trade-union agency. Long labour conflicts are, however, costly and hurtful to trade, while their results are short-lived, and English trade-unionists incline to legislation through a desire to avoid the expense and misery of a strike, and their belief that law will better secure permanence in the arrangements.

In 1909, the coal mines (eight hours) Act was passed, and came into operation in Durham and Northumberland, January 1910.

[Hadfield and Gibbins, *A Shorter Working Day*, 1892.—Webb and Cox, *Eight Hours Day*, 1891.—John Rae, "The Balance-Sheet of Short Hours," in *Contemp. Rev.*, Oct. 1891, and *Eight Hours for Work*, 1894.—J. M. Robertson, *The Eight Hours Question*, 1893.—W. J. Shaxby, *An Eight Hours Day*, 1898.] J. R.

EINERT, Carl (1777-1855), a German jurisconsult, known for his theory of foreign exchanges. Alluding to the influence of political economy on the development of jurisprudence and commercial legislation, Cossa remarks that "Einert's book (*Das Wechselrecht*), propounding a legal theory of the bill of exchange founded on its modern economic functions, contributed largely to prepare the way for the German law of 1848, which marked a new epoch in the history of the legislation of *bills of exchange*" (*Guide to Study of Political Economy*, ed. 1880, pp. 30, 31).

Das Wechselrecht, nach dem Bedürfniss des Wechselgeschäfts im neunzehnten Jahrhunderte, Leipzig, 1839, 8vo.—*Ueber das Wesen und die Form des Literal-Contracts wie dieser zur Zeit der Justinianeischen Gesetzgebung ausgebildert gewesen und Vergleichung desselben mit dem Wechsel*, Leipzig, 1852, 8vo.

[*Dr. C. Einert namentlich in seinen Beziehungen zu der jüngsten Entwickelung des deutschen Wechselrechts dargestellt*, Leipzig, 1855, 8vo.—*Allgemeine Deutsche Biographie*, v. 759.] H. R. T.

EISDELL, Joseph Salway (fl. 19th cent.), author of: *A Treatise on the Industry of Nations, or the Principles of National Economy and Taxation*, London, 1839, 2 vols. 8vo (vol. i. deals with production, and vol. ii. with distribution, consumption, and taxation; translated, with introduction, by Prof. F. Ferrara, in *Biblioteca dell' Economista*, Serie I., vol. viii. Ferrara calls it a mere compilation without special character, but interesting, as showing the views of the English school of economists, "se una scuola inglese vi ha").—*An Essay on the Causes and Remedies of Poverty*, London, 1852, sm. 8vo ("poverty and crime, therefore, among a great mass of the population, are the sign and evidence of industrial improvement, not, however, yet universally adopted," p. 58). H. R. T.

EISELEN, Johann Friedrich Gottfried (1785-1865), born at Rothenburg, died at Halle, where he gave much attention to the conduct of the affairs of the city. He edited a second edition of L. H. von Jakob's *Die Staats-Finanzwissenschaft*, 1837, and wrote:

Grundzüge der Staatswirthschaft oder der freien Volkswirthschaft und der sich darauf beziehenden Regierungskunst, Berlin, 1818, 8vo.—*Handbuch des Systems der Staatswissenschaft*, Breslau, 1828, 8vo.—*Die Lehre von der Volkswirthschaft in ihren allgemeinen Bedingungen und in ihrer besonderen Entwickelung, oder wissenschaftliche Darstellung der bürgerlichen Gesellschaft als Wirthschaftssystem*, Halle, 1843, 8vo.

[*Allgemeine Deutsche Biographie*, v. 764.] H. R. T.

EJECT, EJECTMENT, EJECTION. The object of proceedings in ejectment is to recover possession of land. The action of ejectment, properly so-called, was abolished by the Common Law Procedure Act of 1852. It was used as a means of ascertaining the title to land. It involved a remarkable series of fictions designed to escape from the inconveniences attaching to what were known as real actions (*i.e.* actions for the recovery of real estate). The party claiming delivered to the party in possession a declaration containing the names of imaginary parties, John Doe and Richard Roe. The declaration set out that John Doe was lessee of the land in question, holding of the real plaintiff, and had been ousted by Richard Roe. A notice signed by Richard Roe was served upon the real defendant, to inform him that Richard Roe had no real title to the land, and that judgment would go against him by default, so that the real defendant would be turned out, unless he appeared to defend his title. The action was then tried as between John Doe and the real defendant. If John Doe obtained judgment, this was tantamount to a judgment in favour of the real plaintiff, under whom John Doe claimed. The place of the old action of ejectment is now taken by an action for the recovery of land, which differs little from other actions in the High Court. Proceedings brought by an undisputed proprietor wishing to get rid of a tenant whose term has expired, or who has made default in payment of his rent, are commonly described as proceedings in ejectment. Such proceedings may be taken either at common law or under the Common Law Procedure Act of 1852. The action at common law cannot be brought unless the landlord, or his agent authorised for that purpose, has made a demand of the precise amount of rent then due, and on the precise day on which the rent becomes due under the terms of the agreement. The demand must be made before sunset of that day, and the tenant may pay at any time up to midnight. It must be made either at the place where the rent is payable or on the land itself. The necessity for the demand is the same, even though there be no person on the land to pay. But any or all of these require-

ments may be dispensed with by the express terms of the lease. The Common Law Procedure Act, 1852, dispenses with the formal demand if half-a-year's rent be owing, and no sufficient property to meet the claim can be found on the premises. But this enactment applies only when the agreement of tenancy gives the landlord a right of re-entry for non-payment of rent. When half-a-year's rent is in arrear, and neither the value of the premises nor the annual rent amounts to £50 a year, the county court can order that the landlord shall be put in possession of the premises. By whatever procedure effected, ejectment is the ultimate remedy of a landlord against a defaulting tenant. By means of ejectment he recovers possession of the land for which he no longer receives rent. Unless he could in the last resort employ this remedy, the premises which he has let would often be practically valueless to him. For there may be no sufficient goods on the premises to distrain upon, and the defaulting tenant may not be substantial enough to make it worth while to bring an action against him personally. Besides default might be made again and again by a tenant remaining in possession. The circumstances which make ejectment of defaulting tenants peculiarly unpopular seem to be these: —sympathy with the instinctive attachment which almost all persons feel for a place which they have long inhabited; a vague notion of proprietary right in a tenant who has occupied the land a long time, and a more definite feeling of injustice when the tenant, although a defaulter, has in years past executed improvements which have added to the permanent value of the land. In this last case, adequate compensation should be made, but the power of vindicating proprietary right is essential to the well-being of society. Ejectment and eviction are, legally speaking, the same process, but eviction is perhaps the term oftenest used in common parlance (see EVICTION).

[Wharton, *Law Lexicon*, Art. *Ejectment*.—Woodfall, *Landlord and Tenant* (14th ed.), ch. 22.—Copinger and Munro, *The Law of Rents*, chs. xxiv. and xxv.—AGRIC. HOLDINGS ACT, App.] F. C. M.

ELASTICITY is a technical term employed by Prof. Marshall, to denote the sensitiveness of the response which a certain thing returns to changes in another thing that stands in a causal relation to the former; *i.e.* the ratio between the percentage increase (or, it may be, diminution) of one thing, say x, and the percentage increase (or diminution) of another, say y. (1) in symbols: $\frac{\Delta x}{x} \div \frac{\Delta y}{y}$, or $\frac{\Delta x}{\Delta y} \cdot \frac{y}{x}$ (cp. Marshall, *Principles of Economics*, 2nd edition, bk. iii. ch. iv. p. 160, *et seq.*, *Journal of the Statistical Society*, Jubilee Vol. 1885, p. 256).

An important case is the "elasticity of demand." "The elasticity of demand in a market is great or small according as the amount demanded increases much or little for a given fall in price, and diminishes much or little for a given rise in price" (Marshall, *Principles of Political Economy*, bk. iii. ch. iii. 1st ed.). The difference in this respect between different commodities has been felt, though not so accurately conceived and expressed, by some other writers. Thus Mill: "If the article is a necessary of life, which, rather than resign, people are willing to pay for at any price, a deficiency of one-third may raise the price to double, triple, or quadruple" (*Political Economy*, bk. iii. ch. ii. § 4). And again, "Some things are usually affected in a greater ratio than that of the excess or deficiency, others usually in a less. . . . The amount of what people are willing to expend on it . . . may be affected in very unequal degrees by difficulty or facility of attainment" (*ibid.* bk. iii. ch. viii. § 2). [Compare Auspitz and Lieben, *Theorie des Preises*, p. 41, *et seq.*—Seligman, *Shifting and Incidence of Taxation*, p. 148, *et seq.*—Irving Fisher, *Mathematical Investigations in the Theory of Value and Prices*, p. 46, *et seq.*] Prof. Marshall holds that in general the elasticity of demand "is small, when the price of a thing is *very high* relatively" to the means of a class of purchasers, "and again when it is *very low;* while the elasticity is much greater for prices intermediate between what we may call the *high* level and the *low* level" (Marshall, *Principles of Economics*, bk. iii. ch. iv. § 2). The elasticity of demand is a prime factor in determining the interest which the consumer has in a fall of price (see CONSUMER'S RENT), and the effects of bounties and of monopolies (*op. cit.* bk. v.).

F. Y. E.

ELASTICITY OF DEMAND. See previous article and DEMAND.

ELDER, WILLIAM (1806-1885), was born in Pennsylvania, and died in Washington. He practised medicine and wrote frequently for the press. Besides several volumes in general literature, he published *The Debt and Resources of the United States*, Philadelphia, 1863, pp. 32; *Questions of the Day*, Philadelphia, 1871, pp. 367; and *Conversations on Political Economy*, Philadelphia, 1882, pp. 316. Elder belonged to the Carey School, and advocated a political economy which was national as opposed to cosmopolitan. He introduced the term "guarantyism" to denote the various charitable, savings, and philanthropic agencies to promote thrift.

D. R. D.

ELECTION. The doctrine of election was introduced by the courts of equity (see EQUITY), and may be shortly stated as follows: if by a will or deed a testator or donor disposes of property belonging to another person, and by the same instrument confers a benefit on that

person, such person cannot at the same time accept the benefit conferred upon him and refuse to surrender his property in accordance with the disposition of the testator or donor. He must choose ("is put to his election") as to whether he will accept the benefit and surrender the property in question, or whether he will keep his property and forego the benefit, or at least part of it, the principle being that where the value of the benefit under the will or deed exceeds the value of the property with respect to which the election arises, the party disappointed by the election is not entitled to compensation beyond the value of that property. Thus if a testator by his will gives A an estate belonging to B, of the value of £10,000, and by the same instrument gives B a legacy of £20,000, B may elect to conform to the will by conveying the estate in question to A and receiving the legacy of £20,000; but if he elects against the will, he must pay £10,000 to A by way of compensation and may retain the remaining £10,000. In many cases the facts are not so simple and the doctrine frequently gives rise to considerable difficulty. E. S.

ELEGIT (Writ of). A writ of execution (see Execution), by virtue of which a judgment creditor is enabled to take possession of the debtor's land. The writ does not in itself authorise the creditor to sell the land, but an order for that purpose may be obtained by application to the chancery division of the high court (27 & 28 Vict. c. 112, §§ 4-6). Execution by "writ of elegit" was introduced by the Statute of Westminster (13 Ed. I. c. 18), and originally extended to the debtor's chattels (excluding beasts of the plough), but was restricted to one-half only of the land. The last-named restriction was removed by 1 & 2 Vict. c. 108, whilst on the other hand the Bankruptcy Act 1883, § 146, enacts that writs of elegit are no longer to extend to chattels. A recital is contained in the writ, showing that the creditor has chosen this means of execution in preference to others, which in the original Latin form (quod "elegit") included the word from which the name is derived. E. S.

ELEVATOR. Part of the machinery in unloading vessels (see Docks, *Mechanical Appliances at Docks*). In America a public warehouse for produce (see Warehouses).

ELIBANK, Patrick Murray, fifth lord (1703-1778), lawyer, soldier, and pamphleteer, was admitted a member of the Faculty of Advocates at Edinburgh in 1723, and served in the Carthagena expedition under Lord Cathcart in 1740. He thought the existence of the national debt a very great calamity, and stockholders and stock-jobbers a most pernicious class of men, whose ill-gotten wealth gave them the power to further their speculations by embarking the nation on harmful lines of policy. He accuses them of having caused the war of 1739; and suggests that their property might with advantage be confiscated, like the property of the monasteries in 1537, and the proceeds devoted to encouraging our manufactures by bounties.

On economic subjects Lord Elibank wrote *An Inquiry into the Origin and Consequences of the Public Debt*, Edinburgh, 1753-1754.—*Essay on Paper Money and Banking from Essays on the Public Debt, Frugality*, etc., 1755. This essay is reprinted in M'Culloch's *Select Tracts on Paper Currency, etc.*, London, 1857. M'Culloch says of this, "It is a poor performance."—*Letters on the proposed Plan for altering Entails in Scotland*, Edinburgh, 1765.—See also Douglas's *Peerage of Scotland*. A. H.

ELIOT, Francis Perceval (*c.* 1756-1818), entered the civil service, and for some years before his death was a commissioner of audit at Somerset House. His economic writings are chiefly on subjects connected with currency and banking. He considered that notes might safely be issued on good securities, and need not be restricted to representing actual deposits of bullion. He belongs to a class of writers fostered by the Bank Restriction, who, in Sir Robert Peel's words, "would not admit the doctrine of a metallic standard." Eliot advocated an "ideal money" which "admits of invariable value, because it is not formed of substantial and therefore variable materials." . . . "The money of account remains in itself fixed and undepreciated, while the precious metals may either be suffering an intrinsic depreciation," or the converse (*Observations*, p. 33). As General Walker remarks, it is scarcely worth while to separate the parts of truth and error here. Otherwise a rudimentary conception of the standard which is formed by an Index Number might be ascribed to Eliot. Compare the context of the passages above cited (and *Observations*, p. 41), where reference is made to Sir George Shuckburgh. Consistently with this view, Eliot maintains that during the war it was the gold which was appreciated not the paper depreciated. He wrote:

Demonstration or Financial Remarks with occasional observations on Political Occurrences, 1807 (the first part discussing sinking funds, the latter part "noticing in a summary way some of the principal events since the decease of that ever to be regretted statesman," Pitt.)—*Observations on the Fallacy of the supposed depreciation of the Paper Currency of the Kingdom with reasons for dissenting from the Report of the Bullion Committee*, 1811; Second edition, with a supplement replying to criticisms, 1811.—*Letters on the Political Situation of this Country*, addressed to the Earl of Liverpool by Eliot under the signature of Falkland.—*Pamphleteer*, Nos. vi. and vii. (1814), No. x. (1815), No. xiii. (1816).

[*Quarterly Review*, February 1811—"Tracts on the Report of the Bullion Committee."—Peel, speech on the Bank Charter Act, May 1844.—Walker, *Money*, p. 277.] F. Y. E.

ELIZABETHAN LEGISLATION. For notice of the legislation of the period of Queen Elizabeth, in its reference to economic changes, see LEGISLATION.

ELKING, HENRY (*fl.* 1720), who was at one time extensively engaged in the Greenland whale fishery, published (1) *The Interest of England considered with respect to its Manufactures*, etc., London, 1720, 8vo. This pamphlet was directed against the importation of calicoes by the East India Company, to which Elking attributes "the decay of trade, the melting of coin, the scarcity of silver, and the increase of poor." The importation of East India calicoes was, in accordance with these principles, prohibited in the following year (1721). (2) *A View of the Greenland Trade and Whale Fishery, with the National and Private Advantages thereof*, London, 1722, 8vo, 2nd ed. 1825. Reprinted in vol. iv. of the *Overstone Collection of Select Economical Tracts*, 1859. This is one of the most valuable of the early pamphlets on the whale fishery. Elking gives an account of its origin, and progress of the fishery and its condition at the time he wrote, and suggests means for getting it once more into English hands. (3) *The Interest of Great Britain considered*, etc., London, 1723.

[M'Culloch's *Literature of Pol. Econ.*, p. 233.—Halkett and Laing's *Dictionary of Anonymous Literature*, 1240.—*Brit. Mus. Cat.*] W. A. S. H.

ELLIOTT, EBENEZER (1781-1849). Ebenezer Elliott, the "corn-law rhymer," was born at Masborough near Sheffield, and was the son of a manufacturer who had obtained a share in a small iron-work in that place. He received very little education, but at an early age he began both to read largely and to write verses. His early attempts in verse writing are not of much value. On his marriage he invested the money his wife brought him in his father's business. But the trade was declining at the time; his father died worn out by business anxieties; and after a few years spent in a hopeless struggle, Elliott found that he was a ruined man, ruined, he always maintained, by the corn laws. In the year 1821, however, he made a fresh attempt, and for some years he prospered. But after the year 1837 trade again began to fall off, and when in 1842 he gave up business, he was only able to take with him the sum of £6000. The losses of these five years were another result of the bread-tax he so hated. This hatred was the passion that inspired all his best poems. He was filled with fierce indignation against the law that had kept him poor, as an employer, and that pressed so hardly on the workers whom he wished to benefit. In *The Splendid Village*, *The Village Patriarch*, and above all, in *The Ranter*, the reader feels the depth of his feeling for the poor and his hatred of the landlord class. In the *Corn-law Rhymes* (1831) the whole of his bitter anger breaks out. No one can read them without feeling some share of the indignation that inspired them, and as a picture of the state of men's minds at the time their force and brevity make them invaluable. C. G. C.

[Watkin's *Life, Poetry, and Letters of Ebenezer Elliott*, 1850.—*Athenæum*, 12th January 1850.—*Poetical Works*, 1876.]

ELLIS, WILLIAM (died 1758), a self-taught farmer of unusually wide agricultural knowledge. His early writings made his name. He was afterwards employed by a bookseller to write in monthly instalments, but made the mistake of producing the required quantity by padding with quack receipts, old wives' tales, etc., and thereby injured his reputation. He was too much occupied in travelling about the country, acting as a consulting farmer and selling seeds and agricultural implements, to work his own farm at Little Gaddesden, Herts, according to his own teaching; on his journeys, however, he learned the methods of farming prevalent in different counties, and his habits of observation enabled him to enrich his writings with shrewd criticism and comparisons. He treats most fully of the management and breeds of sheep, the use of manures, the growing of timber, especially of oaks, the need of different soils, and the latest improvements in ploughs. His style is homely, often rough, and sometimes ungrammatical.

The following is a list of his works :—

The Practical Farmer; or, The Hertfordshire Husbandman, 1732.—*Chiltern and Vale Farming explained*, 1733.—*The London and Country Brewer* (see *Country Housewife*, p. 12).—*New Experiments in Husbandry for the Month of April*, 1736.—*The Timber Tree improved*, 1738.—*The Shepherd's Sure Guide*, 1749.—*A Compleat System of experienced improvements, made on Sheep, grass lambs, and house lambs*, 1749.—*The Modern Husbandman*, 1750.—*The Country Housewife's Family Companion*, 1750.—*Every Farmer his own Farrier*, 1759.—In 1772 was published Ellis's *Husbandry abridg'd and methodized*, the original padding and some of the less intelligible and interesting matter being omitted.

[Biographical notice in preface to last named work.] E. G. P.

ELLIS, WILLIAM (1800-1881), ably discharged for fifty years the duties of chief underwriter to the Indemnity Insurance Office. Ellis is mentioned by Mill in his *Autobiography* (among the disciples of Bentham) as "an original thinker in the field of political economy, now honourably known by his apostolic exertions for the improvement of education." Of these distinctions the latter appears the more permanent. Ellis used to convey to the young a knowledge of political, or as he preferred to say "social," economy and of "right conduct," by the method of "Socratic" dialogue. His method deserves this epithet, so far as it inculcated the homely virtues with the zeal of the Socrates of Xenophon. A Platonic vein of

speculation is not to be looked for in Ellis's dialogues.

A good account of Ellis's "conduct teaching" is given in the *Memoirs* written by his granddaughter, Ethel Ellis, 1888. The *Life*, by E. K. Blyth, 1889, describes his economical, as well as his educational, work; and contains a complete list of his writings. Of these may be mentioned: various articles in the *Westminster Review;* including one on M'Culloch's *Political Economy* by Ellis and J. S. Mill jointly (July 1825); *Outlines of Social Economy*, 1846; *Progressive Lessons in Social Science; Philosocrates*, 1861-64.

J. S. Mill refers to an essay by Ellis, published in the *Westminster Review* for January 1826, as "the most scientific treatment of the subject which I have met with" (*Pol. Econ.*, ch. iv. § 2). The subject is "the effect of the employment of machinery on the happiness of the working classes," an effect which the writer pronounces to be beneficial with less qualification than economists would now generally employ. F. Y. E.

ELLMAN, JOHN (1753-1832). A successful farmer of Glynde in Sussex, best known for his improvements in the breed of Southdown sheep, for the origination of the Sussex Agricultural Association, and as one of the founders of the Smithfield Cattle Show. As an agriculturist he was so much esteemed by his contemporaries that his biographer, Walesby, writing shortly after his death, claims that Ellman had by his discoveries so increased the productiveness of agriculture as to effectually disprove the doctrines of Malthus. Ellman himself abstained from abstract economics, and is chiefly interesting to students of the science for his helping ARTHUR YOUNG (*q.v.*) with materials for the latter's *Annals of Agriculture*. Ellman appears, from his correspondence with Young in this connection, to have supposed that the POOR RATE (*q.v.*) and similar imposts fell almost exclusively on the farmers, who had to support the used-up labourers when past work in factories. He also urged very strongly that the wages of labour should be proportional to the labourer's skill.

[See life of Ellman in preface to Baxter's *Library of Agriculture*, 4th ed., 1851.—Young's *Annals of Agriculture*, London, 1784, etc.; and *Dictionary of National Biography*, London, 1888.] A. H.

ÉLUS were financial officers in France who superintended the collection of taxes in those provinces which had not estates, or assemblies, of their own. They are to be distinguished from the *trésoriers*, who collected the domain revenue. The *élus* originated in 1356, when the states-general made the most notable attempt to impose constitutional checks upon the crown. Not content with claiming the sole right of imposing taxes, they insisted upon entrusting their collection to their own elected officials (*élus*). Charles V. subsequently maintained both the taxes and the collectors of 1356, though he turned the latter into royal officials, and they continued till the revolution. The district of an *élu* was called an *élection*, and hence the provinces which had no estates come to be called the *pays d'élection*, as distinguished from the *pays d'états*. The provincial estates were quite distinct from the ÉTATS GÉNÉRAUX (*q.v.*)

[De Tocqueville, *L'Ancien Régime.*] R. L.

EMANCIPATION. The general subject is dealt with in connection with SERFDOM, SLAVERY, ENFRANCHISEMENT OF LAND, and VILLENAGE, but the emancipation of the negro slaves in America offers some points of special economic interest. The main influences which led to abolition were unquestionably moral and religious; but there had been growing up a strong suspicion that the system was wasteful, and it was too palpably an outrage upon the prevalent *laissez-faire* principle to last far into the 19th century, wherever English ideas were in vogue. A close scrutiny brought out that the one solid basis of efficiency was the easiness of direction of unskilled labour in large masses, but the following objections left a large adverse balance.

(1) Slave labour wasted the soil through its lack of intelligence; (2) it confined agriculture to certain products, especially sugar, cotton, tobacco; (3) it prevented the rise of manufactures; (4) it degraded labour, and thus arrested immigration of fresh white people, and prevented the formation of an industrious middle class; (5) it prevented the industrial development of which the negro population was capable; (6) it kept down the gross production of a community in favour of net-production; and further, kept back net-production in general, in favour of the net-production appropriated to a small portion of the community. Allowing for the general material progress of the world as a stimulant, and in the case of the British West Indies for the equalisation of the sugar duties in 1846 and the rise of beet sugar since 1860, as obstructions, a comparison of the present condition of the countries affected with their condition before emancipation substantiates this arraignment of the slave system in every point.

(1) With greater intelligence and better appliances the soils are no longer wastefully exhausted. Mr. Briggs, an intelligent Barbados planter, who resolutely improved his methods, made a large fortune soon after emancipation, and the soil of that island now appears likely to continue to yield its 50,000 tons of sugar a year indefinitely. (2) Agriculture has been extended and varied. In the West Indies the once despised "subsidiary" products have, in gross, taken the chief place from sugar, except in Barbados; lands hitherto thought useless have been brought into cultivation—50,000 acres were added to cultivated areas in Jamaica alone between 1880 and 1890; in South Carolina the forests are giving employment to 700 timber mills; in Brazil coffee-production increases every decade. (3) Manufactures have sprung

into existence in the Southern States. In South Carolina minerals are being worked, notably the phosphate rock; and manufactures have passed from 8½ million dollars before emancipation to 16¾ millions in 1880 and 32 millions in 1884. In the West Indies to turn to manufactures would be pernicious waste of natural advantages, and no one desires to see it done. (4) The lower classes of the white race are rapidly improving their position. Professor Bryce says of the South, "The chasm that used to divide the poor whites from the planters has been in many places bridged over by the growth of a middle class of small proprietors in the country and of manufacturing industries in the coal and iron regions" (*American Commonwealth*, iii. p. 95). In the West Indies there is no change in this respect; the employing class has diminished (Jamaica from 40,000 to 17,000), and opinion is, on the whole, against the suitability of these colonies for any other class of white people. (5) There has arisen in the West Indies a peasant class of negroes of whom it is no exaggeration to say that they have the most favoured lot that has ever fallen to any considerable portion of their race. In Barbados, where there was no unoccupied land available for squatting, the emancipated negroes at once became wage-earners, and they so continue; in Jamaica there was abundance of land available, and the planters were so ill-tempered in their attitude to the new status that the negroes in large numbers became independent peasants, and the separation of labour from capital has therefore been far wider than it needed to have been. There are now over 90,000 small holdings among the 100,000 families in the colony. In Trinidad and Demerara also the negroes abandoned plantation work, and resort was made to East Indian coolies for this purpose; still the negro population increases and prospers on other products—cocoa, for example, and fruits not requiring much capital and adapted for small-scale production. In the Southern States, whatever is to be allowed as to their low political and social condition from a European point of view, it cannot be gainsaid that there are now millions of negroes industrially wealthy in comparison with the condition of their fathers, whose labour had little influence upon their own material well-being. (6) The gross produce of all the countries affected has more than kept pace with the growth of population, and the wealth is more widely distributed. Whereas, in former times 60,000 families worked in Jamaica on slave rations, while some 8000 received an abnormal return for both capital and superintendence, an examination of the imports now shows that there is a very considerable net-produce in the hands of the common people of the colony. If the summit of luxury has fallen, the level of subsistence has risen to a stage of comfort and civilised life. The statistics of all the countries in question indicate a similar change. Even in Cuba, where the emancipation has not led to any extensive industrial change, the output of sugar has not been affected so far.

The following remarkable figures are given for Brazil:—Annual produce of coffee, 1835-1840, slave-trade in existence, 88 million lbs.; 1855-1860, slave trade abolished, 264 millions; 1872-1877, emancipation by purchase in progress, 389 millions; 1890, emancipation completed, 880 millions.

Of course fixed capital was lost during the transition, but when the old capitalist class still represents Jamaica, for example, as a standing reproach to Great Britain, serious inquirers will find this unsupported by the official statistics of the colony. If a colony with an increasing area of cultivation, an increasing public revenue, and increased expenditure on public institutions of all kinds, increased support of voluntary religious bodies including a now disestablished branch of the Episcopal church, and a pauperism of less than one per cent, is a reproach, where are the jewels of an imperial crown to be sought?

[The economic chapters and appendices in Cairnes's *The Slave Power*, 2nd ed., 1863, excellently introduce the subject, which can be further studied in the histories of the various colonies (especially Gardner's *Jamaica*, 1873), of the United States of America, of Cuba, and of Brazil. For the present condition of the countries affected, the many statistical works published in America show the situation in the southern states; whilst our colonies can be studied in the Reports in their Blue Books, issued from time to time by the colonial office for a few pence each. Amongst noteworthy articles of recent issue are N. Lubbock, *Our West Indian Colonies* (from sugar-merchant's point of view).—*Royal Colonial Institute Proceedings*, vol. xvii.—H. Fowler, "Capital and Labour for the West Indies," *ibid.*, vol. xxi.—Lord Brassey, "The West Indies in 1892," *ibid.*, vol. xxiii.—D. Morris, "Fruit as a Factor in Colonial Commerce," *ibid.*, vol. xviii.—C. S. Salmon, *Capital and Labour in West Indies*, Pamphlet, 1883.] A. C.

EMBARGO. The word "embargo" used in a general sense means any prohibition affecting commerce; in a more special sense, it is a term of international law implying the seizure of foreign ships. Formerly ships belonging to a foreign power were placed under embargo in contemplation of war, but in modern times this practice has been discontinued, and the only occasion on which an embargo of ships is now resorted to is when it is sought to use reprisals in the case of any specific wrong committed by any foreign state. If in such a case the relations between the two powers concerned re-assume their normal condition, the ships which have been placed under embargo are released; if on the other hand war is declared, the ships are confiscated (see ANGARIE, DROIT D').

[Hall's *International Law*, 3rd ed. 1890, pp. 366 373.] E. S.

EMBEZZLEMENT. This offence is defined in Mr. Justice Stephen's *Digest of the Criminal Law* (Art. 309) as "the conversion by a clerk, or servant, or person employed in the capacity of a clerk or servant, of any chattel, money, or valuable security delivered to or received or taken into possession by him for or in the name or on account of his master or employer." Embezzlement differs from theft principally in the circumstance that the thing embezzled has not yet come into the possession of the person entitled to it, and is not taken out of his possession by the offender, whilst in the case of theft the thing stolen is taken by the offender out of the possession of the person entitled to it. Thus, if a shopman receives money for goods sold by him for his employer and puts this money into the till and then takes it out of the till and appropriates it, he commits a theft of the money. But if the shopman, after receiving the money, puts it into his pocket and afterwards applies it to his own purposes, this is embezzlement. If a clerk or servant appropriates a thing given into his custody by his employer, this act is not embezzlement but theft. For the thing so misappropriated is regarded by law as still in the possession of the employer. A further distinction between theft and embezzlement lies in the fact that theft may be committed by anybody upon anybody, but that embezzlement can be committed only by a clerk or servant or person employed in the capacity of a clerk or servant and with reference to property belonging to the employer. Accordingly, before an offence against property can be described as embezzlement, it must be shown that the property was in the possession of the offender, and that he stood in the relation of a clerk or servant to the injured party. The ascertainment of these points is often a matter of great nicety. Embezzlement is a felony, and renders the criminal liable to a maximum penalty of fourteen years' penal servitude.

[For the present state of the law regarding embezzlement, consult Stephen, *Digest of the Criminal Law*, Arts. 297, 309-312, and 325. For the history of the law regarding embezzlement, see Stephen, *History of the Criminal Law*, vol. iii. pp. 151-156.] F. C. M.

EMBLEMENTS (from the med. Latin word *embladare* = to sow with corn), technical name for growing crops. Where the owner of land dies intestate, the emblements do not go with the land, but devolve on the personal representative for the benefit of the next of kin (*e.g.* if a man dies leaving two sons and one daughter, the land goes to the eldest son, and the emblements are divided between the three children in equal parts). A person entitled to land for his own life, or during the life of another person, is entitled to the crops sown during his tenancy and reaped after its termination; but it is now provided (by 14 & 15 Vict. c. 25), that in the case of land held at rack rent, the tenant or his representative may after the termination of the tenancy hold on the same terms to the end of the current year; and the rule as to emblements does not therefore come into operation in such cases. E. S.

EMERSON, Gouverneur, M.D. (1796-1874), was born in Delaware and settled as a physician in Philadelphia. He devoted much of his time to scientific and agricultural inquiries; and gave special attention to medical and vital statistics. In 1872 he translated and prepared a preface for *The Organisation of Labor* by F. Le Play, Philadelphia, pp. 417, preface, pp. v.-xiii.

[*Biographical Encycl. of Pennsylvania*, 1874, p. 27.] D. R. D.

EMIGRATION — its Effects on the Country of Origin. In all that has been written on the subject of emigration, a minor place has been assigned to the discussion of its effects upon the population of the country which the emigrant leaves. The assumption, however, that these effects must be in every way beneficial underlies most of the pamphlet and other literature on the subject of emigration and colonisation which exercised the public mind in this country during the period from 1820 to 1850, or thereabout.

It would be idle to dwell on the pre-historic migrations of the Indo-European races, or the hardly less remote expatriation of the Phœnicians. Nor will our knowledge of the economic condition of the ancient Greeks justify us in drawing too confident conclusions from the most regular system of emigration which the ancient world exhibited. The Romans were not given to emigrate in the sense in which we now use the term, although they made great political use of their "colonies." Nor can the descent of the barbarous hordes of the north on the declining Roman empire in the early centuries of our era, or the victorious career of Spanish conquest in the new world in the 16th century, be considered to furnish any economic lesson. Such movements of population as those of the Flemings and Huguenots to England in the 14th and 17th centuries were pregnant with economic results, but were too partial and irregular to constitute an era of emigration.

The beginning of emigration, as we have to consider it, may be placed in the 17th century; and the nations which chiefly furnish instances of it are the English, the French, the Dutch, and Portuguese. The motives which prompted these earlier streams of emigration were usually love of adventure or political discontent. The feature which marked this emigration off from previous movements was its steady set towards new countries; the freshness and emptiness of

the new lands swelled the volume of the stream which they attracted. There can be little doubt that the new impulse reacted with a considerable effect on the conditions of life in the countries which the emigrants left behind; the Dutch being at that time the first to feel the influence.

With the 19th century emigration entered on a new phase, and then England was in the van. She was suffering from acute commercial distress at home, and anxious about her vast possessions abroad. It occurred to a certain section of thinkers that the latter could be utilised as a remedy for the former, and various schemes of state-aided emigration to the colonies were much debated throughout the second quarter of the century, both in and out of parliament. Such were those to facilitate emigration from the south of Ireland to Canada (1823) and to relieve distress in the Highlands of Scotland (1841). At this time, indeed, the idea of emigration became merged in the more complex idea of colonisation. "Of colonisation," writes WAKEFIELD, "the principal elements are emigration, and the permanent settlement of the emigrants on unoccupied land." We refer again later to the distinction between the secondary results of emigration to a foreign state, and those of emigration to a colony or similar possession.

What was thought of the economic bearing of emigration at the time alluded to may best be gathered from the following passage from Wakefield's *View of the Art of Colonisation*.

"My fancy pictures a sort and amount of colonisation that would amply repay its cost by providing happily for our redundant people; by improving the state of those who remained at home; by supplying us largely with food and the raw materials of manufacture; and by gratifying our best feelings of national pride, through the extension over the unoccupied parts of the earth of a nationality truly British in language, religion, laws, institutions, and attachment to the empire."

The first words of this passage strike the keynote of the modern intention in emigration. The movements of the individual and the larger schemes projected by the state are alike connected with the sense of undue pressure and competition at home. Professor Mayo Smith laid it down that persons rarely emigrate in order to better themselves, but because they are actually pinched at home. Love of adventure, political complications, religious difficulties, which have been active forces in causing emigration formerly, play a less conspicuous part now; but are still not absolutely unimportant. The former large emigration from Germany, which was usually assigned to the existence of conscription, may with greater probability be traced to the pressure of financial burthens resulting from military expenditure. It is difficult to clear from confusion the motives affecting various states since the war of 1914-18, or to propound any general view of present efforts at emigration. But as far as the United Kingdom is concerned it is the fact that once more the most definite attempt at systematic emigration is being made by the British for economic reasons affecting the empire generally. The mother country and her self-governing dominions are co-operating on definite lines.

The economic effect of emigration on any particular state must largely depend upon the functions which have daily been discharged by the emigrant. We must ascertain what are the classes of people who do emigrate. It is not enough to speak about "relieving one labour market and supplying another"; we must discover if we can what branch of labour is chiefly affected, and to what extent its efficiency is impaired by the removal of its active members. Next in importance is the question of volume of emigration and drain on the population.

Thus emigration must be examined both as to quantity and quality; but having arrived in any particular case at an estimate of the actual loss to the country which is involved, we shall have to set off against it the advantages gained by the persons left behind, the freedom from over-competition, the raising of the standard of comfort, and so forth—a subtle and difficult inquiry. In this way we should gauge what may be considered the primary results of emigration.

The secondary results are partly commercial, partly political. Mill kept the first-named very clearly before him when he penned the following passage:—

"The question is in general treated too exclusively as one of distribution—of relieving one labour market and supplying another. It is this, but it is also a question of production, and of the most efficient employment of the productive resources of the world. Much has been said of the good economy of importing commodities from the place where they can be bought cheapest; while the good economy of producing them where they can be produced cheapest is comparatively little thought of. . . . The exportation of labourers and capital from old to new countries, from a place where their productive power is less to a place where it is greater, increases by so much the aggregate produce of the labour and capital of the world. It adds to the joint wealth of the old and the new country what amounts in a short period to many times the mere cost of effecting the transport. There needs be no hesitation in affirming that colonisation, in the present state of the world, is the best affair of business in which the capital of an old and wealthy country can engage."

Similarly Wakefield, in a work which followed

Mill's: "The practice of colonisation . . . has reacted with momentous consequences on old countries by creating and supplying new objects of desire, by stimulating industry and skill, by promoting manufactures and commerce, by greatly augmenting the wealth and population of the world"; and he goes on to add in words which we may quote without tying ourselves to accept them, "it has occasioned directly a peculiar form of government, the really democratic, and has been, indirectly, a main cause of the political changes and tendencies which now agitate Europe."

The above sketch of the lines to be followed in an investigation into the effects of emigration may be considered to hold good generally for all times and for all peoples; but it is questionable whether any sufficiently trustworthy data exist to enable us to draw fair inferences concerning the earlier emigrations. Even in regard to recent years we shall do well if we can arrive at fairly accurate conclusions in respect of one or two countries, such as England or Germany, in which statistics are becoming understood. It is hardly necessary to observe that the case of the United States, whose statistics are sufficiently careful and elaborate, furnishes no illustration of the effect of emigration. Such emigration as may take place from the States is so individual and spasmodic that, compared with the large volume of IMMIGRATION (*q.v.*), it may be neglected.

In considering the results of emigration from Europe in the 17th and 18th centuries, it is almost impossible to separate political and economic phenomena.

Spain suddenly found an area for her development which has been unequalled even by Great Britain; she subdued many native peoples and settled a vast territory. There was a constant flow of Spaniards to Central and South America. The ease of conquest and the lust of gain had a large share in the deterioration of the national character; loss of population and a false conception of wealth completed the downfall of an empire. If it be sought to fasten a portion of the blame on emigration it will not be forgotten that, while the drain on the resources of the old country was excessive, the Spanish emigrants were for the most part the worst type of mercenary soldiers.

The history of Portugal presents rather different features. The Portuguese in those days, as now, were deeply imbued with the trading instinct; they had far more capacity than the Spaniard for settling down on new territory. The effect of discovery and conquest in this case is parallel to that upon Holland; a people dwelling in a circumscribed area suddenly rose to the level of a first-class state; the more rapid loss of power by Portugal was probably due to the weakness of its political constitution as compared with that stern combination of free men who had gone through the fire of oppression and emerged a fresh nation.

The Netherlands form the best instance, besides our own country, of the beneficial effects of regular emigration. To them it was a safety-valve: the closing years of the 16th century had purged away the dross of the nation; it was composed of men, on the whole, remarkably even in power, will, and capacity; to avoid fretting and wear and tear at home a proportion of such men must find an outlet abroad; the emigration from Holland accordingly included many of the best of its citizens, and they did not hesitate to settle permanently in their new homes, and reproduce the political constitutions and commercial aptitude of the mother country. On the other hand the volume of emigration was not large, and we have De Witt's authority for the fact that there was a constant immigration into the free republic from surrounding nations; the centre of the system was never exhausted. The new settlements distinctly increased the trade and power of the Netherlands; the monopoly which they established of the East India trade was only partly due to the chartered company; it could not have lasted so long but for the Dutch merchants on the other side of the world.

We may pass over France, which furnishes no further lesson, and take the early history of English emigration. There we find emigration proceeding along two distinct lines—the intentional transportation by the great companies of such persons as would form a useful community, and the voluntary expatriation of large bodies of persons of the same political or religious persuasion. The class of emigrants who left England at that time was thus, in the main, a very good one. It was only natural that the intention of the founders of the settlements should be better than the results attained. The proposal in the case of Carolina—that not more than 100 or 150 settlers should be sent over the first year, and none but labourers, artisans, and skilful seamen should be sent during the next two or three years—is a fair sample of the way in which the nucleus of a colony was intended to be constituted. But in practice it was impossible to avoid an influx of worthless characters; and in spite of BACON'S warning, adventurers and government alike could not resist the temptation of sending out condemned prisoners, vagrants, gipsies, and bad characters,—people "divers ways gathered up in England."

England, however, did not lose by the exodus. "Virginia," says Doyle, "was the offspring of economical distress:" in fact, Great Britain could at the time afford to part with a large slice of population. The ablest workmen and richest merchants did not go; those who did emigrate, whether honest men or rogues, left a feeling of relief among those who remained

behind them; there was more elbow-room, but there was no gap; the work at home went on better.

The number that emigrated at this period was considerable; although our information is not sufficient to be tabulated. To Virginia alone 1261 persons went in 1619, 1000 in one year previous to 1635, 2000 the next year, 1600 the next, and so on—many thousands in all; and the movement was steady year by year. In 1639 an order in council was issued with the object of restraining the efflux of population. There was an alarm that this was becoming a drain on the country's resources. But the very next year there were appeals for the rescission of the order in whole or in part; and Sir Josiah CHILD, writing in 1692, denies that there ever had been a drain on the people.

In the large extent of this emigration lay the germs of its future benefit to England. The plantations called out enterprise and activity on the part of those who remained behind. "I say," writes Child, "that for provisions, clothes, and household goods, seamen and all others employed about materials for building, fitting, and victualling of ships, every Englishman in Barbadoes or Jamaica creates employment for four men at home." The emigration of a considerable number of men, and the successful growth of their settlements in new lands, transformed England into the first commercial and carrying nation of the world.

In the 18th century the stream of emigration flowed more slowly; the severance of the United States, and the wars in which Great Britain was engaged, both contributed to check it; and when next it assumed larger proportions a new era had begun—the era of emigration without conquest or settlement, directed as much to foreign countries as to British possessions. In 1815 the number of emigrants from the United Kingdom was 2081, in 1820 it was 25,729, in 1830, 56,907; in that year the Colonisation Society was formed; in the next year the first effort was made to regulate emigration; an agent general for emigration and certain "South Australian" commissioners were the chief centres of authority for some years, and in 1840 the Colonial Land and Emigration Board was established in Downing Street. It had become clear that the matter was one of great interest both to the mother country and the colonies. On the one hand was the theory described as "shovelling out the paupers," on the other was the demand that no emigrant should be sent to the colonies except under proper safeguards, and with some guarantee of his fitness. And generally on lines settled nearly a century ago, the attitude of the state towards emigration has remained to the present time. The activity of societies and other quasi-public influences increased during the nineteenth century side by side with official efforts chiefly emanating from the self-governing states of the Empire: and the establishment of the Emigrants' Information Office in 1885 marked a sort of epoch. Since 1918 the emigration policy of the United Kingdom has taken a new departure. The Royal Commission on the resources and industries of the British Empire reported in favour of a more active control of emigration. The Government introduced legislation for the purpose; and on the 6th December 1918 the Committee of the Emigrants' Information Office resigned: a new Government Emigration Committee, soon known as the Oversea Settlement Committee, was constituted "to deal effectively with the problems which are likely to arise during the period of reconstruction after the War." The first report of the new body shortly put their view that "the development of the population and wealth of the whole British Empire is the key to the problem of post-War reconstruction."

We may now examine in detail, in the case of our own country, the questions indicated above as the test by which results should be judged.

As regards the stamp of the emigrants from England it is specially noted in 1845 that one-half were unskilled labourers, and four-fifths of the remainder agricultural labourers and farmers. A study of the Board of Trade returns seems to show a gradual increase in the emigration of the skilled artisan and men trained in some calling. While Sir R. Giffen, in a report on the returns around 1890, has no doubt of the "broad fact that the majority of the adult male emigrants are labourers, and of single adult female emigrants domestic servants," it appears that in less than fifty years the proportion of skilled or professional emigrants had risen from ten to thirty-seven per cent; and in the latest returns which can be considered normal that proportion is much the same. In 1913 the 287,639 persons of eighteen years old and upwards leaving the United Kingdom were classified as follows in regard to occupation:

Males—

Agricultural	33,815
Commercial and professional	31,248
Skilled trades	51,413
Labourers	29,484
Miscellaneous	17,890

Females—

Domestic and other servants	40,772
Dressmakers and other trades	7,245
Teachers, clerks, professions	5,830
No stated occupation	69,942

Assuming that the majority of those whose occupations are not stated were also unskilled, this last category would include some 174,000 out of the total 287,639—leaving about 39 per cent as the proportion of skilled and professional emigrants.

Apparently neither of the two usual statements made as to the class of persons who leave the country is correct. The pauper cannot go—despite the theory that emigration was to relieve the weakest portion of the community; the receiving country rejects him, and the regulations which agents of government here and abroad have sought to enforce constantly tend to encourage the better class of emigrant. Macintyre, more than eighty years ago, insisted on this: "Emigration, as it is carried on from this country, does not afford any relief to the masses of the people reduced to the verge of starvation." . . . "The conditions required of the persons selected for emigration show that they are picked individuals." Emigration has done little or nothing towards elevating the lowest classes of our people. But, on the other hand, it appears to be untrue that only the best of them are leaving us. While it is pretty clear that a man must have some capital before he can migrate to the Dominions or go to the United States, especially if he take his family with him, and that he must have some energy to cause him to make the effort to move, the fact seems to be that the best and most skilled workers, those who feel they can make their way, remain at home; the less competent hands emigrate. This opinion has been endorsed by Sir R. Giffen (comp. Francis Galton's *Hereditary Genius*, p. 346). Hence it appears that the loss of productive power to the country is not serious. And if the productive capacity, the skill and worth of the emigrants is improved in their new sphere, there is a clear economic gain to the world at large. There may, however, be a loss to the particular community in having to educate and bring up a new set of children to take the place of trained adult emigrants.

The questions of the effect of the removal of labour on wages, and the prospect of thereby raising the standard of comfort amongst the labouring classes, bring up the consideration of the volume of emigration. To raise wages in any particular trade it is necessary that an ample number of that particular craft should be removed at one time; and that is an event which does not occur.

In computing the volume of emigration, it is necessary to set off against it the total of immigration in each year. Thus in 1923 the gross number of British emigrants from the United Kingdom to non-European countries was 256,824; the number of immigrants was 57,606; the net emigration being thus 198,678. Sir R. Giffen has said that both emigration and immigration vary in well-defined cycles, guided by the state of trade; when prosperity is at its height there is a decline of gross emigration, accompanied by increase of immigration. It has unfortunately happened of late years in England that the immigrants who take the place of our British emigrants are foreigners of a lower stamp who tend to lower the standard of comfort and depress the status of the workers.

The annual average number of persons of British and Irish origin who have emigrated since 1851, with proportion to the total population of the United Kingdom, is as follows:

Period.	Annual Average.	Proportion to Total Population.
1851-1860	164,085	·58 per cent.
1861-1870	157,182	·50 ,,
1871-1880	167,891	·51 ,,
1881-1890	255,853	·70 ,,
1891-1900	174,279	·44 ,,
1901-1910	284,146	·65 ,,
1911-1912	461,096	1·01 ,,

These figures include tourists and travellers as well as emigrants. In 1912 a new method of computation was adopted demanding a statement of the countries of last and of intended future permanent residence. It is now possible to separate emigrants from and immigrants to the United Kingdom from transient passengers. Thus in 1912-13 out of 474,509 British subjects who left for non-European countries, 407,729 were *bonâ fide* emigrants, and of 341,660 persons (British and alien) who arrived, 74,798 intended to remain.

Of the emigrants from the United Kingdom in 1912 about 25 per cent went to the United States, 40 per cent to British North America, 18 per cent to Australia, 13 per cent to other British Colonies, and 4 per cent to other foreign countries.

The war which began in 1914 at once checked emigration, and its effects have profoundly influenced the movements of migrants between different countries. The new policy has already been mentioned. The changed facts may be indicated as follows:

Net Emigration of British Subjects.	To British Destinations.	To U.S.A. and elsewhere.
1913 303,685	223,521	80,164
1923 198,678	112,624	86,054

The proportion of emigrants to the United States increased from 25 per cent to nearer 45 per cent, and that at a time when emigration to other parts of the Empire was an adopted policy. The most prosperous country in the world was bound to draw the best emigrants.

The secondary results of emigration are (*a*) commercial; (*b*) political.

(*a*) The commercial results may differ according as the emigrants go to a foreign country or a dependency, provided the latter is not protected like a foreign country against the national goods. And there has been a marked tendency towards a definite preference in favour of the old country among the great British oversea dominions.

The general effect of what is now called Empire migration is well described by Wakefield:

"The emigrants would be producers of food . . . and raw materials of manufacture for this country; we should buy their surplus food and raw materials with manufactured goods. Every piece of our colonisation, therefore, would add to the power of the whole mass of new countries to supply us with employment for capital and labour at home. Thus employment for capital and labour would be increased in two ways and two places at the same time; abroad, in the colonies, by the removal of capital and people to fresh fields of production; at home by the extension of markets or the importation of food and raw materials."

How true this is may be seen by the growth of trade between Great Britain and her colonies (see IMPORTS and EXPORTS). The enhancement of Great Britain's commercial prosperity, owing to emigration to her colonies and the United States, is an admitted fact; though when the emigrant goes to a foreign country and is lost in the general mass of its population, it is impossible to earmark his particular effect on increase of trade: if trade were free, old association might do much; but in the vast majority of cases the matter is determined by other causes. Yet the German emigrants, by their system of "peaceful penetration," increased the national commerce with foreigners in a manner which was quite as advantageous as any migration to an actual dependency.

But a large emigration may sometimes produce a transfer of trade which is a distinct loss to the country left behind. Something of this sort has resulted from high tariffs, and the attempt to counteract those tariffs, when manufactures and plant are transferred bodily to their best market.

(*b*) With purely political results of emigration we are not here concerned. On the one hand, it should tend to the union of nations and to the establishment of peace; on the other, it is always increasing the responsibility of a nation towards foreign powers. England with her many subjects scattered over the globe, and her vast possessions across the seas, is the great example of a double responsibility.

In such a review as the present it is natural to select Great Britain as the leading illustration of the theme. And we have dealt with the kingdom as a whole. In Scotland and Ireland, taken separately, we find two well-marked opposite results. Scotland has sent out a steady stream of emigrants whose departure has only strengthened those who were left behind. Ireland, partly from poverty, partly from political causes, has been rapidly depleted of the stronger part of her population. In other countries we also find special phases to notice. Norway and Sweden have both been centres of a large emigration, which appears to be regaining strength. In Italy the annual emigration is considerable. Germany, on political grounds, has endeavoured to check the tendency to emigrate. The comparative strength of emigration in certain European countries may be gauged by the following figures:

Emigration from	1887-8.	1910-11.	
Germany	2·10	·39	per 1000
Italy	6·87	15·43	
Norway	10·58	5·02	
Sweden	9·86	3·59	

The latest report of the Oversea Settlement Committee lays stress on the comparative insignificance of emigration from the United Kingdom at present. The nett emigration in 1923 works out at 4·6 per 1000 as against 10·05 shortly before the War. Indeed, as a rule, emigration is not a serious set-off against the natural increase of population. Only in rare cases, and usually islands, has population been kept stationary by emigration.

A reference is required to the considerable emigration from India to the British tropical colonies, and from China and Japan to the Australian colonies and the United States.

The Indian Government never encouraged emigration, except under very strict conditions and safeguards. Yet it was all to the advantage of India that the lowest classes of the population should go and come back much improved in circumstances, with standards of living greatly raised. But the population of India is so crowded that hardly a mark can yet be said to have been left upon it by emigration.

The questions arising from Asiatic emigration are largely political: but in the case of Japan emigration is sought as a valuable outlet for the natural increase of a vigorous population in a restricted area.

[The aspect of emigration here discussed is but slightly referred to in most published works. Special attention may be called to chapters II. and IX. of *Immigration and Emigration: A Study in Social Science*, Prof. Mayo Smith, London, 1890: this book has a full bibliography.—The reports of the Emigration Commissioners from 1832 to 1870.—The annual statistics of the Board of Trade, especially the reports for 1877 and 1891. Reports on the Emigrants' Information Office, 1887-1914.—*An Essay on Plantations*, by Sir Francis Bacon.—*A Treatise*, by John de Witt, Pensioner of Holland.—*A Discourse concerning Plantations*, by Sir Josiah Child (all three republished amongst select tracts, London, 1827).—*The Effects of Distant Colonisation on the Parent State*, Thomas Arnold, 1815.—*Thoughts on Population and Starvation*, by J. J. Macintyre, London, 1841.—*Letter on the Condition of England*, by R. Torrens, 1843.—*A View of the Art of Colonisation*, by E. Gibbon Wakefield,

London, 1849. — An essay *Ueber italienische Auswanderung und Feldarbeit* in *Italienische Gyps-Figuren*, von W. Kaden, Leipzic, 1891. — *Reports of Oversea Settlement Committee*, Parl. Paper (Cd. 1804, 2107), 1922-3.] C. A. H.

[For the effect on the country which receives the emigrants, see IMMIGRATION.]

EMINENT DOMAIN. This term, in constant use among American lawyers and publicists, but still hardly familiar in England, seems to be derived from a phrase of Grotius (*De Jure Belli ac Pacis*, l. i. ch. iii. vi. § 2) where, speaking of the attributes of supreme public authority in a state, he says: "in quibus comprehenditur et dominium eminens quod civitas habet in cives et res civium ad usum publicum." That is to say, there is in every state a paramount authority over the persons and property of its subjects for matters of public advantage. It will be carefully observed that this is not a right of property, and is quite independent of the laws or doctrines as to the tenure of any kind of property which prevail in this or that state. Where the state, or a public department, in a corporate capacity, or as an ideal or "moral" person, is the owner of any property, its rights are the ordinary rights of an owner. The right or power now in question is to supersede the ordinary rights of the subject, whatever they may be. In other passages Grotius calls it "supereminent," as if to make this clear. Being a power above ordinary legal rights, it can be set in motion only by an exercise of legal sovereignty; in other words it can take effect in a civilised state, except perhaps in singular emergencies, only by express legislation or under some authority conferred by express legislation. This passage alone does not make it clear whether Grotius contemplated the right or power of "eminent domain" as something capable of being in frequent and normal action, and having a settled place in the institutions of public law. Perhaps he was here thinking rather of impressing men for service against an invader, entering on private land to make fortifications (a power attributed to the crown from ancient times by the common law of England), taking horses and provisions for urgent military needs, and the like. But in a later chapter (l. iii. ch. xx. vii. § 1) he distinctly says that it is not merely an emergency power, but exists for the sake of the public weal in general. In modern usage we speak of "eminent domain" only as exercisable with regard to property. Experience has shown that many objects of public utility and necessity cannot be effected without overriding the ordinary rights of owners, and especially the right of parting with one's property, if at all, only on such terms as one thinks fit to accept. On the other hand it is found necessary or expedient to make interference of this kind as little burdensome to the individual as is consistent with accomplishing the public objects in view, and to avoid, both in fact and in appearance, anything like arbitrary disturbance of private rights. Hence the exercise of sovereignty in this kind is reduced to rule and brought under legal and judicial categories. Under names denoting either the power itself, as "eminent domain" in America, or the principal mode and effect of its exercise, as "compulsory purchase" in England, "expropriation pour cause d'utilité publique" in France, "Zwangsenteignung" in Germany (where, however, "Expropriation" is in more general use), we find the matter dealt with, on substantially similar lines, in the legislation and jurisprudence of most civilised countries.

The principles recognised, it is believed, in all jurisdictions, though secured by various forms of procedure, are that private property is not to be taken by compulsion unless for some object of which the public utility has been proved, that it must not be taken without just compensation, and that the compensation must be paid or at least put in the way of impartial ascertainment before possession can be required. The enactment of the French Civil Code "Nul ne peut être contraint de céder sa propriété, si ce n'est pour cause d'utilité publique, et moyennant une juste et préalable indemnité" (art. 545) may be taken as a concise and typical statement. It is copied or translated in many other codes (*e.g.* Civil Code of Lower Canada, art. 407). The exercise of eminent domain on terms of just compensation goes back, in France, to the early 14th century (see Philippe le Bel's ordinance quoted, *Law Quart. Rev.*, iii. 316). A law of 1841 (to be found in the collections of *Lois usuelles*) now regulates the procedure in France; it has probably served as a model for similar legislation in many of the countries which have adopted the Napoleonic codes or come under their influence. In England the method has been for promoters of public works, such as canals, bridges over navigable rivers, and in later times railways, to apply to parliament for incorporation, and at the same time to seek the grant of compulsory powers. Parliament cannot of course be bound by any positive law in the exercise of its supreme power of law-making, but the settled practice of Parliament in dealing with private bills embodies all the essential safeguards. What is called "proving the preamble" of a private bill is really a quasi-judicial process of establishing, by full and often keenly-contested argument, the utility of the proposed undertaking. Compensation used to be separately provided for in every Act granting compulsory powers to take land: at length "the multiplicity of such statutes and the general similarity of their provisions led to the enactment of various general laws, notably the Lands Clauses Con-

solidation Act of 1845, which," together with later amending Acts dealing with particular matters of procedure, "is really a code regulating the law and practice of the eminent domain." (Mr. Carman F. Randolph in *Law Quarterly Review*, iii. 323). "Lands Clauses Acts" and "Compensation" are the English lawyer's practical catch-words on the subject. The ultimate feudal superiority of the crown has nothing to do with eminent domain, although the two things have sometimes been confused even by able writers. It is sufficient to say that the principles are the same, and the practice alike in all essential matters, in France, where feudal tenures have long been abolished, and in the United States, where they never had any effective existence.

Eminent domain has been described by the highest American authority, the Supreme Court of the United States, as "the right which belongs to the society or to the sovereign of disposing in cases of necessity, and for the public safety, of all the wealth contained in the State"—*Pollard's lessee* v. *Hayan* (1844), 15 Curtis, 391, 395, s.c. 3 How. 212. It is carefully distinguished by American publicists from the right, which they call the *police power*, of restraining the use of private property in ways which may be dangerous, offensive, or otherwise injurious to the public weal. The specially full discussion and definition of these topics in the United States proceeds from the fact that the legislative power, both of the federal and of the state governments, is not unlimited, but must be exercised in conformity with the constitutions of the United States and of the respective states of the union.

[American treatises on Constitutional Law; Kent's *Comm.*, ii. 339, and ch. xv. of Cooley on *Constitutional Limitations* will suffice for most general purposes; also recent works on *Eminent Domain* by Lewis, 1888; and Mill, 2nd ed. same date.—In England, Cripps on the *Principles of the Law of Compensation*, 3rd ed. 1892. Mr. Randolph's article above cited, *L.Q.R.*, iii. 314, gives a convenient general view.] F. P.

EMMERY DE SEPT FONTAINES, HENRI CHARLES (1789-1842), was chief engineer of the *Ponts et Chaussées*. He superintended the construction of the canal of Saint Maur, and of the bridge over the Seine at Ivry, and about five miles of sewers and six miles of water-conduits were laid by him in Paris between 1832 and 1840. He principally wrote on subjects connected with his profession, but published in 1837 a short pamphlet of thirty-two pages, *Amélioration du sort des Ouvriers dans les Travaux Publics*, in which he condensed the results of his own experience of the state of workmen employed in extensive public works. He strongly advocated the arbitration of the State *Ingénieurs* in all contentions arising between contractors for the State and their workmen, and the responsibility, according to the case, of the State or of the head contractors for accidents or ill-health resulting from unhealthiness of work. He gives some interesting statistical details on the amount of indemnities allowed under these heads of the principal works he had superintended. On an average, they amounted to 35 francs (say £1 : 8s.) per case, and to the proportion of 3, 2·25, and 0·50 francs per 1000 francs (2s. 5d., 1s. 10½d. and 5d. per £40) of the gross cost of works performed. E. Ca.

EMPANEL. To put the names of jurymen on a list which is called the panel. E. S.

EMPHYTEUSIS. An expression of Roman law, for the permanent letting of land at a chief rent, called *pensio*. The tenant was, for all practical purposes, the owner of the land (cp. FEU). E. S.

EMPIRICISM. Empiricism is a term of somewhat vague import. Perhaps it is oftenest used in an unfavourable sense to describe the frame of mind of one who cannot or will not reason from general principles, but guides himself in every emergency by reference to particular experiences. Consistent empiricism in this sense is, strictly speaking, impossible. The empiric who most loudly disclaims recourse to general propositions must employ them as soon as he begins to apply his empirical wisdom. He must reflect somewhat after this fashion:—The present case resembles, or does not resemble, certain cases which I have known. Therefore certain results which followed in those cases are likely, or are unlikely, to ensue in this case. Therefore I ought, or I ought not, to take such and such measures. Here the most scrupulous empiric is reduced to employ both induction and deduction, to form a theory applicable to more than the single case before him; in a word, to have recourse to general reasoning. It is true that he may not utter his argument aloud, that he may be himself unconscious that he is arguing. Men of practical genius, whether soldiers or statesmen, men of business, or medical men, often carry out extremely complicated and subtle processes of reasoning which they have no time to note, which language is hardly adequate to express, and which produce upon bystanders the effect of a happy unaccountable knack. Such men are often mistaken for mere empirics, but that is only because they theorise so rapidly and so well.

Empiricism, in so far as it is serious, may be described as an illogical protest against the abuse of logic. Most persons of systematic mind are in such a hurry to complete a system that they will not take time either to ascertain all the facts important to be known or to give to each known fact its due place and significance. Accordingly they make wild work when they apply their systems to the facts of life.

The mischief thus occasioned has often led men of real sagacity to express themselves as though all reasoning were useless in practice, whilst they only meant to say that any reasoning which is to be of use in practice must be difficult.

The empiric and the theorist have by turns exerted a dominating influence upon the study of political economy among all nations. Until the 18th century books of economic theory were comparatively few, and their practical influence was comparatively small. Statesmen and the public sought economic guidance chiefly from persons actually engaged in industry and commerce. Of this empirical wisdom Sir Thomas GRESHAM may be taken as a favourable instance. If its admonitions were now and then disregarded, this was less in deference to the opinion of economic theorists than in deference to a supposed interest of government or doctrine of religion or morals. But in the course of the 18th century theoretical writers upon political economy began to acquire an unprecedented authority. To their teaching chiefly was due the revolution in favour of individual freedom and unrestrained competition which filled the first half of the 19th century. Since the middle of that century empiricism has perhaps regained some of its former power. The views of Adam SMITH and his immediate successors were perhaps more deeply coloured by the circumstances of their own age than they themselves could be conscious of, or would have admitted at the time, for nothing is more difficult even for the deepest thinker than to clear himself of the influence of the atmosphere in which he moves and has moved all his life. The correction of economic doctrine by later students has made the main theory enunciated at once more accurate and comprehensive, and less easy of practical application. Political power has passed to classes who do not read political economy, and politicians do not think it prudent to quote economists. But political economy may regain its former influence when it is more generally studied and its lessons are enforced by the stern teaching of actual experience. F. C. M.

EMPLOYERS AND EMPLOYED. During recent years economic writers have been bringing into greater prominence the functions of the employer in industrial affairs. The older English economists regarded the agents concerned in the production of wealth as three in number, viz. land, labour, and capital; and in a similar way they considered that the classes concerned in the distribution of wealth were three in number also, viz. landlords, labourers, and capitalists. The landlord received rent, the labourer wages, and the capitalist profits. They analysed indeed the share of the capitalist or PROFITS into the constituent elements of interest on capital, insurance against risk, and wages of superintendence or management; but they did not apparently establish any distinct conception in their own minds—nor did they endeavour to instil any such conception into the minds of their readers—of the employer as separate from the capitalist. And it was natural that they should adopt this position; for it is only with the modern development of the BANKING and BILL-BROKING system, which permits of the systematic lending of capital by one man, or body of men, to another, and only also with the modern growth of large industries (see LARGE AND SMALL TRADE) that the functions of the employer have acquired a marked and separate importance of their own. Under the DOMESTIC SYSTEM OF INDUSTRY, which previously prevailed, manufacture was carried on mainly in the houses of craftsmen, who were generally employers on a small scale, working for the most part for a market near at hand, the conditions of which varied but little, and supplying in the main from their own resources the capital needed for conducting their business. But, with the changes consequent on the INDUSTRIAL REVOLUTION at the close of the 18th and the opening of the 19th century, manufacturing industry passed from villages to towns, and from the house of the craftsman to the factory of the employer. The functions of the employer as such became important; for he had to anticipate the fluctuating demands of a world-wide market, and to direct the operations of a multitude of workmen who were engaged under an organised system of minute DIVISION OF LABOUR on small portions of work, all of which were necessary to, and formed part of, a complete manufacture. He now acquired also to some extent a separate character from that of the capitalist; for, although he generally possessed some capital of his own, he could, through the agency of bankers and others, obtain the loan of further capital from those who did not wish to enter on active business for themselves, but were glad to receive interest for the use of their surplus wealth. And hence at the present time, while it is recognised that the functions of the employer and of the capitalist are to some extent as a general rule combined in one person, and while it is still held by most writers that the term profits should be understood as including interest on capital as well as wages or earnings of superintendence or management, it is also considered that an adequate classification of those among whom the wealth produced in a country is distributed should assign a distinct place to employers as such, and by some writers it is urged that the term "profits" should be confined to that part of the employer's receipts which belong to him as such, that is, to his earnings or wages of management or superintendence, and should not be extended to the interest which he obtains as a capitalist for himself, or hands over to some one else from

whom he has procured a loan. This last view is held, amongst others, by the American economist, General F. A. Walker, who, together with Bagehot in England, has been specially instrumental in bringing the importance and distinctive character of the functions of the employer into due prominence. He has even adopted (*Political Economy*, pt. iv. ch. iv.) a theory which regards the profits of the employer, using the term profits in this narrow sense, as being of the nature of RENT, and depending for amount on the natural ability possessed, and the opportunity enjoyed, by different employers, in the same way as the economic rent of land depends on its fertility and situation. But among English writers, at any rate, the term profits is generally employed in the wider sense; although there is a growing tendency to regard that part of them which represents earnings or wages of management or superintendence, as governed by similar laws to those which determine the earnings of labour generally.

The employer's labour, it is held, is labour of a high, and indeed of a special class, but it is none the less labour, and it must not be confounded in any way with interest on capital (see EARNINGS AND INTEREST FUND). Bagehot has compared (*Economic Studies*, pp. 53, etc.) the modern employer to the editor of a newspaper, or the general of an army, and has remarked in a striking passage that just as the general of an army is "nowadays a man at the far end of a telegraph—a Count Moltke with his head over some papers—who sees that the proper persons are slain, and who secures the victory," so in commerce the "whole" is now "an affair of money and management—of a thinking man in a dark office computing the prices of guns or worsteds." The employer "settles what goods shall be made, and what not; what brought to market, and what not. He is the general of the army; he fixes on the plan of operations, organises its means, and superintends its execution. If he does this well, the business succeeds and continues; if he does it ill, the business fails and ceases. Everything depends on the correctness of the unseen decisions, on the secret sagacity of the determining mind." In a similar way General Walker (*Wages Question*, ch. xiv.), after remarking that the conditions of admission to the employing class are a "long self-initiation, a high premium of immediate loss, and a great degree of uncertainty as to ultimate success," quotes from M. Courcelle-Seneuil's *Opérations de Banque* (p. 392) an enumeration of the qualities which an employer should possess. They are "du jugement, du bon sens, de la fermeté, de la décision, une appréciation froide et calme, une intelligence ouverte et vigilante, peu d'imagination, beaucoup de mémoire et d'application" (judgment, good sense, firmness, decision, a calm and cool temper, an open and alert mind, little power of imagination, great power of memory and of application). Professor and Mrs. Marshall (*Economics of Industry*, bk. iii. ch. ix. § 4, old edition) regard the work of the employer as consisting of two main varieties. "The first is that of organising the production; of determining what shall be made, and how it shall be made; and of deciding where and when to buy and sell. We may," they remark, "adopt an American term and call this *engineering* the business. The second part of his work, which may be called that of *superintendence*, consists in providing for the proper carrying out of his instructions." As the size of the business increases, the employer tends more and more to depute the duties of superintendence to subordinate managers and foremen, and to concentrate his own thought and attention on the *engineering* of the business. To some extent he becomes, as Bagehot has aptly expressed it (*Economic Studies*, p. 59), like a cabinet minister, who may be shifted from one department of state to another in successful reliance on the specialised knowledge of the subordinate permanent officials. He ceases indeed to be personally acquainted with his actual workmen, but he is able to bring his ability and experience to bear more exclusively on the work of management. "The highest class of employers," writes General Walker (*Political Economy*, pt. iv. ch. iv.) consists of those "rarely-gifted persons who, in common phrase, seem to turn everything they touch into gold; whose commercial dealings have the air of magic; who have such power of insight as almost to seem to have the power of foresight; who are so resolute and firm in temper that apprehensions and alarms, and repeated shocks of disaster, never cause them to relax their hold or change their course; who have such command over men that all with whom they have to do acquire vigour from the contact, and work for them as they would not, perhaps could not, work for others, just as great captains (see INDUSTRY, CAPTAINS OF) inspire their armies with a confidence which alone goes far to make them invincible." Below these men come a "much larger" class of a "high order of talent, though without genius or anything savouring of magic"—"men of natural mastery, sagacious, prompt, and resolute in their avocations." Then come the "men who, on the whole, do well, or pretty well, in business;" and lower down come a "multitude of men who are found in the control of business enterprises for no very good reason that can be seen by those who know them." The passages which have been quoted will sufficiently indicate the nature of the work and qualities required of a modern employer, and will explain the high remuneration which he often commands. The average earnings, indeed, of employers seem now to be falling, with the

general diffusion of education and the rapid spread of inventive discovery. But the modern world of business offers greater opportunities for exceptional talent and extraordinary luck than have perhaps ever before been afforded; and the amount of capital and of labour placed at the disposal of a single employer is frequently very considerable. The employer is in a sense the pivot on which the modern world of industry revolves, and the distinctive prominence into which he has been brought in more recent economic literature has conduced to greater definiteness in questions of distribution generally, and in particular in the consideration of three matters of the first importance. The conception that a conflict between labour and capital is involved in the relations of employers to employed is shown to be somewhat misleading; for the employer is in a sense a labourer as well as the employed, and he often does not furnish himself the whole of the capital which he uses. It may even be supplied by individuals who are themselves employed in his own or in other trades. The employer is in reality a middleman, a kind of "buffer" intervening between one set of individuals and another; and, while he may have to bear the first brunt of the conflict, he may also shift part of the burden on to others. The conflict is not then entirely, though it may be partly, between labour and capital; but it is in some degree between one class of labourers and another, who are both interested in obtaining the supply of capital on advantageous terms, and are on the other hand respectively anxious to secure for themselves the larger share of the produce remaining when the claims of capital have been met. Another question, on which considerable light is thrown by the modern analyses of distribution, is the question of co-operative production (see CO-OPERATION). This has sometimes been represented as a question of combining the functions of capital and labour in the persons of the same individuals; but in reality, as General Walker has shown (*Wages Question*, ch. xv.), it involves the elimination of the employer. The workmen wish to take the responsibilities of management upon themselves, and to secure for their own benefit the profits of the employer. They are unable to dispense with capital, even if they entertain such a wish; and they may acquire capital, and become capitalists, without co-operative production. But the object, at which they really aim, is more difficult, for the functions of the employer are very important, and they are making an attempt to undertake them themselves. A third and last question, which is affected by the distinctive importance of these functions, is that of SOCIALISM (*q.v.*) Modern socialist writers represent the products of manufacture as due entirely to the labour of the actual workmen, and therefore as belonging of right to them. They regard the employer as an exploiter and robber of labour, and they consider profits as the outcome of the surplus value (cp. VALUE) of what the labourer produces over what is required for his subsistence. This theory of surplus value is fallacious in other respects; but part of its error may be traced to a failure to distinguish the functions of the employer as such from those of the capitalist as such, and to separate that portion of profits which forms the reward or earnings of the difficult work of management from that which is simply and solely interest on capital.

[In addition to the books mentioned above the student should consult J. S. Mill, *Political Economy*, bk. ii. ch. xv. for the older definition of profits, and the *Boston Quarterly Journal of Economics* for 1888 and 1893 for the controversy raised by General Walker's *Theory of Business Profits*. Reference should be made to Marshall's *Principles of Economics*, bk. iv. ch. xii., bk. vi. chs. vii. and viii., and Sidgwick's *Political Economy*, bk. ii. chs. i. and viii., for the disposition to regard the labour of employers as subject to the laws affecting labour generally. For the tendency to a fall in average profits Leroy-Beaulieu's "*Essai sur la répartition des richesses*, ch. xi. and the *Report of the Industrial Remuneration Conference*, 1887, pp. 4, etc. and 186, etc., should be studied. Pierstorff, *Unternehmergewinn.*—H. v. Mangoldt, *Die Lehre vom Unternehmergewinn.*—Loria, *La rendita fondiaria e la sua elisione naturale* (see also ENTREPRENEUR).] L. L. P.

EMPLOYERS' LIABILITY ACT, 1880, 43 & 44 Vict. c. 42, extends and regulates the liability of employers to make compensation for personal injuries suffered by workmen in their service. At common law the liability of an employer differed with respect to persons in his employment, from that with respect to persons not in his employment (see COMMON EMPLOYMENT, DOCTRINE OF). He was not liable to his servants for the consequences of acts done by fellow-servants in the course of their service. He was, however, liable to them for injuries resulting from the negligence of himself or his partner. Thus he was bound to take reasonable care that his plant and machinery were in a safe condition, and that servants selected by him were competent to their work. But his liability to persons not in his service was far more extensive. He was liable for injuries caused to them by his servants, even when he had not been guilty of any negligence, even when he had expressly forbidden the act producing injurious consequences. The difference of the employer's liability towards his servants and towards the public came to be more oppressively felt as industry was more and more concentrated in huge concerns, such as railways and factories, where the range of choice between employers is limited, and service involves co-operation with a multitude of other "hands" about whose

individual care or dexterity nobody can learn much. The influence of the working class was exerted to obtain a modification of the common law, and the Employers' Liability Act embodies a compromise on the subject. It provides that in five specified cases the workman who has sustained injury through the action of a fellow-workman may bring an action for redress as though he were not in the same employment. Where the injury arises from (1) any defect in the works, plant, or machinery; (2) the neglect of any person superintending; (3) the neglect of any person whose orders the workman was bound to obey when the injury took place; (4) the act of any fellow-servant done in obedience to the rules, by-laws, or instructions (if improper or defective) of the employer or his delegate; (5) the negligence of any signalman, pointsman, or person having charge of a locomotive on a railway, the workman is put on the same footing with the public. The act excluded seamen, domestic servants, and any servant not employed in manual labour. If the injury proved fatal, the right of action passed to the dead man's representative. A new principle with regard to Employers' Liability was introduced by the Workmen's Compensation Act, 1897, by which, in certain employments, workmen had the right to compensation for all injuries received while in the performance of their duties entirely irrespective of negligence. The Workmen's Compensation Act, 1906, extended this right to all persons in service including seamen, but excluding the naval, military, and police services, persons earning more than £250 a year not by manual labour, casual labourers, etc. The conditions of claim are (1) personal injury by accident (see NATIONAL INSURANCE, WORKMEN'S COMPENSATION, etc.), wilful injury excluded except when resulting in death or permanent disablement, but including death or disablement from industrial diseases; (2) the accident must arise out of and in the course of employment. The meaning of this was thoroughly considered in *Dennis v. White & Co.* (1917), A.C. 479. Generally the employer is liable for accidents happening to workman going to or leaving the work premises if the latter is following a recognised way, but he must not be injured through choosing the most dangerous way (*Lancashire, etc., Ry. v. Highley* (1917), A.C. 352); (3) the period of complete disablement must be at least one week; (4) notice of the accident must be given as soon as practicable; (5) medical examination may be required. The serious and wilful misconduct of the workman forfeits all claim. Two Amending Acts were passed in 1918, and in 1917 and 1919 two others provided for additional compensation, but these last were repealed, other additions sanctioned and numerous amendments made by the Workmen's Compensation Act 1923, ch. 42.

W. A. B.

EMPLOYING CLASS. General F. A. Walker, who has contributed greatly to bring into due prominence the functions discharged by the employer (see EMPLOYERS AND EMPLOYED) in the modern world of industry, draws a distinction (*Wages Question*, ch. xiv.) between what he calls a "false employing class" and the "real employing class," to the latter of which alone these functions in his opinion properly belong. The "false employing class" includes, in the first place, those who hire servants who help their employers rather to consume the wealth they have previously produced than to produce fresh wealth. In the second place it includes artisans who are employers on so small a scale that they have only single apprentices; and in the third place it comprises those who are nominally employers, but practically are partners of the employed; and, fourthly and lastly, it contains those who "cling to the skirts" of the profession. The "real employing class," therefore, is the "comparatively small body of men" which is reached by eliminating these various kinds of "false" employers.

L. L. P.

EMPLOYMENT. The number of persons employed in the performance of labour in a country obviously cannot exceed the number of persons capable of labour existing in the country, and, as a matter of fact, it is never for any length of time very much below this number; in all countries the able-bodied unemployed, including not only the men "out of work," but all others who from whatever cause are not engaged in labour, are but a minute fraction of the whole able-bodied population. This is sufficient to show that, broadly speaking, the number of persons employed is regulated in the main by the number of persons seeking employment, or in other words, desirous of earning a livelihood by labour. In a small community, say of ten or twelve persons, living in entire isolation from their fellows, every one would find it easy enough to obtain employment, though he might find that a great deal of employment produced very little food. In a great community where co-operation in the production of wealth is effected by means of exchange, the fact that there is always a certain small proportion of persons seeking employment who are unable to find it is chiefly due to the circumstance that, owing to the division of employments, every kind of production comes to be carried on by people who have by training and experience acquired particular skill in that kind of production, so that when the demand for any one commodity slackens and the number of those who produce it has to be reduced, or at any rate not increased at its normal rate, the persons deprived of this employment are not immediately absorbed in other employments.

[Marshall, *Elements of Economics of Industry*, pp. 368, 369.]

E. C.

EMPLOYMENT OF WOMEN AND CHILDREN IN AGRICULTURE. See FEMALE LABOUR.

EMPLOYMENTS. See articles on LABOUR.

EMPTION. The right of the crown, exercised from time immemorial, *to take and buy* "at its need" or "for its use" an indefinite amount of commodities, at such price or on such terms of payment as the circumstances of the case might warrant. It was claimed by Edward I. in 1297 that the king was "free to buy and sell like another"; the advantage to the crown being that such purchases were paid for by tallies, and the amount of the maltolte deducted from the purchase-money (see MALATOLTA). Hall, *History of Custom Revenue*, vol. i. pp. 62, 64; (see also PREËMPTION and PURVEYANCE). H. HA.

EMPTIO-VENDITIO. The Roman contract of sale, or of buying and selling as it is called in order to denote its bilateral character, is formed by one contracting party promising to pay a sum of money or price (*pretium*), and the other party promising to deliver a thing (*merx*) in return. The contract is binding by mere agreement between the parties, neither requiring any formality nor delivery on one side, and so belonging to the class of contracts called consensual. *Arrha* (see ARLES; EARNEST MONEY), a sum of money or other object of value frequently given by a contracting party to afford evidence of the contract, and a security for its fulfilment, is not a requisite of the contract itself. There can be no contract of *emptio-venditio* unless a determinate price, or a price which can be made so (*id certum est quod certum reddi potest*), is made part of the agreement. It was at one time a subject of dispute whether the price must necessarily be in money; thus the Sabinian school of jurists maintained that exchange was a species, and the oldest species, of sale, citing in support of their view the lines of Homer—

"Here touched Achæan barks in quest of wine,
They purchased it with copper and with steel,
With hides, with horned cattle, and with slaves."
(Poste's *Gaius*, III. § 141.)

But the view prevailed that sale was a contract distinguished from barter or exchange by the fact that it had for its object the payment of a sum of money for a thing.

When the contract of *emptio-venditio* is complete the vendor is bound to deliver the thing to the purchaser and the purchaser to pay the price of the thing, but one party cannot be compelled to perform his part if the other will not perform on his side. The obligation of the vendor is not to make the purchaser owner of the thing, but only to give him possession of it. If, however, the purchaser is evicted by a third party who has a superior title, the vendor is obliged to make good to him the loss. Ownership of the thing does not pass to the purchaser until possession of it has been delivered to him and he has paid the price, if it is a ready-money transaction. But though the property has not passed to the purchaser, he is subject to the risk (*periculum*) of its accidental loss, *i.e.* of loss which cannot be attributed to the negligence of the vendor from the time of entering into the contract (*respuit emptori*). This rule is only applicable where there is a specific object appropriated to the contract. If the thing is determined only by its genus or kind, the risk does not attach to the purchaser until the thing has been weighed, measured, or counted, and the purchaser has had notice of this having been done. The purchaser, on the other hand, could claim all accessions and profits of the thing bought arising between the making of the contract and the date of delivery.

The vendor is liable on account of defects in the thing sold, not only when he represents that they are absent, or fraudulently conceals their existence, but, according to the law established by the edict of the curule Ædiles, who had jurisdiction over the market, even on account of latent defects of the existence of which he was unaware. Thus in the Roman contract of sale there is an implied warranty that the thing sold is free from defects. Such, in brief outline, are the main features of the contract of *emptio-venditio*, with which those of the English contract of sale of goods may be usefully compared. E. A. W.

EMULATION, EFFECTS OF, ON SOCIETY. The feeling of emulation may be defined as the desire to excel one's fellow-creatures in any respect whatsoever. It thus admits of infinite variations, produces the most dissimilar consequences, and gives rise to the most contradictory judgments. At its best the spirit of emulation is hardly distinguishable from the desire to achieve greatness or perfection, at its worst the spirit of emulation is hardly distinguishable from envy and uncharitableness. It is, however, an indestructible instinct, which may be schooled but cannot be extirpated, and which is most powerful in the most vigorous natures. Further, it prompts to unceasing effort because it is insatiable. The plain animal appetites may be sated; but emulation incessantly creates anew its object of desire, and, the more it has accomplished, finds the more to be done. Next to the instinct of self-preservation and the instinct of sex, the instinct of emulation has probably had greater effects than any other upon the economic history of mankind. We may consider its effects shortly under three heads: (1) *Emulation in accumulating wealth*, (2) *Emulation in expending wealth*, (3) *Emulation in other directions.*

(1) Emulation in accumulating wealth. The desire to be richer than one's neighbour, to excel him in the power and consideration given by wealth, has been a prime factor in accumulation. Its force has varied chiefly with two

circumstances: with the degree of desire for wealth characterising any given society, and with the proportion of persons who have had a chance of acquiring riches. As to the former circumstance, societies have differed considerably in the value which they assign to wealth in comparison with the other goods of life. The causes of this difference are too many and too subtle to be enumerated here; but among the most influential are different moral and religious ideals, different stages of political development, different degrees of command over the resources of nature. As to the latter circumstance—the proportion of persons who can indulge a spirit of emulation in the pursuit of riches is exceedingly variable. In many societies a small proportion has been above, and a large part has been below, any active emulation in wealth. Sometimes a class of nobles has owed its pre-eminence rather to birth and to military prowess than to riches, and has therefore been less emulous of riches. Often a class of slaves who were legally incompetent to hold property, or of serfs who were not adequately protected by law in the enjoyment of their property, or a class of underpaid free labourers who could barely earn their daily bread and nothing more, has found it difficult or impossible to rise into a more comfortable condition, still more to compete in a rivalry of riches. In such a case the spirit of emulation dies out, because not fed with hope. These remarks might be illustrated from the history of mediæval Europe, in which the emulation of riches appears as a great force only in certain classes and in certain places. But in such communities as our colonies and the United States of America, in which material well-being is the accepted ideal, in which every citizen has hopes of realising this ideal, and in which the command over natural resources is almost unbounded, the emulation of wealth becomes a passion as universal as it is intense, and impels to an amazing economic development.

It is conceivable, indeed, that emulation in the pursuit of wealth might become so intense as to lessen, not to augment, the wealth of society. Thus a community of men so zealous in the pursuit of wealth that they grudged time, trouble, and money for national defence, or for alleviating social evils, might end in subjection to a foreign power or in mere anarchy; and would in either case be reduced to comparative poverty. The same result might follow if emulation in the pursuit of riches led to a universal disregard of commercial integrity or to a neglect of all liberal culture. For there is no instinct which, if left to itself, will not sometimes defeat itself.

(2) Emulation in expending wealth must be taken to mean emulation in expenditure which is not directly productive. The immediate result of such emulation is to lessen wealth. Its ultimate result will depend on many considerations. Thus the wealthy citizens of Rome rivalled each other in expenditure on public works intended for the health and recreation of the public; the burghers of mediæval Europe in building and endowing churches; the nobles of France in display at Versailles. Clearly each of these modes of emulation in expense differed from the rest in its ultimate economic effects, although each was in the first instance non-productive. Again, emulation in expense has different economic results accordingly as it is the emulation of a productive or of a non-productive class. The courtier of Versailles, when he had squandered his fortune, remained poor or had to squeeze his dependents. The American, when he has spent lavishly in Europe, goes back to his country and works yet harder to make another fortune.

(3) Emulation in other directions. Every form of emulation soon or late produces economic consequences. In all ages wealth has followed power, and has been kept by strength. Few nations have got wealth and none have kept it unless there was an emulation of public spirit and military virtue among their citizens. Intellectual emulation, emulation in knowledge and culture, has always stimulated economic and industrial development, and often most effectually when it has been most free from sordid motives. Thus the wealth of modern Germany is directly due to the intelligence of the age of Goethe and the public virtue of the age of Bismarck. Again, the economic condition of the later Roman empire and of the middle ages must have been considerably affected by the emulation of ascetic piety which withdrew so many of the strongest wills and keenest intellects from the world to the cloister. The immediate result was an economic loss, although this may have been partially countervailed by the civilising influence of many monastic bodies. Even emulation in mere sports and pastimes would be found to influence occasionally the economic state of society. F. C. M.

ENCABEZAMIENTO, a contract between the Spanish treasury and the local authorities, by which, after a preliminary estimate of the taxes to be levied, the latter engaged to collect and remit the amount. The first known *encabezamiento* goes back to 1494. E. Ca.

ENCLOSURES. Of "enclosing," *i.e.* the fencing round of land which had previously lain open, whether as common field or as common waste, we hear but little before the 13th century, when the necessity for statutory regulation points to the existence of the custom and of differences between the lords of manors and their tenants. About the origin of those common rights of pasture which play so important a part in the history of enclosures, there has been much controversy; but there is

an increasing consensus of opinion as to the main legal points. Although in strict feudal theory the land belonged to the king as the supreme landlord, the lords of manors came in course of time to be treated as owners of the soil within the manor, who in various ways granted certain rights over it to their tenants. Land might be cultivated by the tenants for their lord or for themselves according to a common system of husbandry, upon certain terms which in many cases included certain pasture rights. These might be (1) rights over the arable land during the year, when under the three-field system it was lying fallow, or during the period between harvest and the sowing of seed; or (2) the right of herding a certain number of animals in a common close; or (3) rights over the wastes and woods belonging to the manor. Whether the lord could from the earliest times enclose at will is a matter of some controversy, but, by the statute of Merton, 1236 (20 Hen. III. c. 4), a parliamentary sanction was given to the enclosure of wastes by the lord of a manor, provided that sufficient pasture was left for the requirements of his freehold tenants; while by the Statute of Westminster, II., 1285 (13 Edw. I. c. 46), enclosure was permitted as against commoners who, without being tenants, possessed pasture rights by a special grant. Until the middle of the 14th century the enclosure of open fields in the interests of tillage continued, and many agreements were made between lords and commoners destroying the common rights over the arable land between harvest and seed-time, and sometimes involving exchange of land. Since such enclosure simply implied the rearrangement of estates, and required the same resident population as before, while the conversion from wood and waste into arable land—another feature of the time—found employment for a larger population, no grievance could arise, and the agricultural gain was great. But owing to the scarcity of labour after the ravages of the Black Death (1349), and the consequent introduction of the lease system, attention was turned to the advantages of pasture farming over tillage. When to these influences there was added, in the 15th century, a desire to promote commercial interests by increasing the supply of wool for exportation, pasture farming was still more widely introduced. Sheep could not be properly reared upon open commons, or upon the small scattered strips, and thus arose the policy of enclosing commons wherever this was possible, either by force, or by voluntary agreement; while the profits of sheep-farming led to the conversion of much arable into pasture land. Tenants were encouraged to consolidate their holdings, to exchange their strips in the open fields for separate farms, and to divide the common pasture with the lord, or in some way to make an agreement with him. The economic advantage of enclosure for grazing purposes was doubtless great, but the social and political dangers were considerable, as was pointed out by many contemporary writers who dwelt upon the depopulation of vast tracts, the diminished sphere for employment, the increase of pauperism, the pressure of evictions, and the loss of customary rights. These evils became more apparent after the dissolution of the monasteries; the earlier agricultural system had been retained on many estates which were confiscated, and thus passed under the new system, while the customary rights of the tenants were held to be overridden by the royal grant. Various statutes were enacted throughout the 16th century for the encouragement of tillage, but it was not until its close that the danger passed away. Edward VI. issued a commission in 1548, to investigate the matter throughout the country, but it was unable to put an end to the social discontent, which found an expression in Kett's Rebellion in 1549. The subject was summarised in the charge read by John Hales at the opening of the commission, and in the *Brief Conceipt of English Policy* (see ed. 1893 under the title of *A Discourse of the Commonweal of this Realm of England*, and article by Miss E. Lamond, *English Historical Review*, 1891). By the close of Elizabeth's reign complaints about enclosures in the interest of pasture farming seem to have ceased; this was partly due to the encouragement given to the growth and export of corn, a course which had a more beneficial effect in reviving tillage than the many statutes passed with that object. From this time onwards enclosure of waste and common fields alike is chiefly advocated in the interest of tillage, not of pasture. In the 17th century many writers advocated enclosures of common fields for the improvement of tillage. Steps were taken for the draining and enclosing of the fens under the direction of Cornelius Vermüyden, a Zealander, while the Earl of Bedford headed an enterprise for enclosing the level which bears his name. In each case the undertakers were rewarded with a portion of the lands thus reclaimed, and this led under the Commonwealth to serious riots on the part of the fen men, whose customary rights were thus set aside. The only other noteworthy feature in the history of 17th-century enclosing, was occasioned by the financial necessities of Charles I., which led him to institute proceedings against those who had encroached upon the royal forests. Heavy fines were imposed upon offenders who had thus enclosed, but it is doubtful whether the king derived as much profit from this source of revenue as he had anticipated.

Until the reign of Charles II. enclosures were effected by agreement between the owners of land and those who possessed rights of common, commissioners being appointed to allot the

lands; the agreement was ratified by the court of chancery, or by royal licence where crown interests were concerned, but from the reign of Charles II. a parliamentary sanction was required. This was only given after the consent of the landlord, the tithe owner, and four-fifths of the commoners had been obtained in favour of enclosure. During the first half of the 18th century enclosing continued slowly; but the rise of a moneyed class interested in agriculture and willing to spend money on agricultural improvements, the increased use of green crops, which raised the profits of tillage, but which could not be profitably worked under the open-field system, the increase of population together with the withdrawal of a large portion from agricultural labour, the difficulty of providing a sufficient food-supply and the danger of dependence upon foreign countries, together with the famine prices produced by the French wars—all these various causes combined necessitated the utmost development of natural resources, and gave an enormous impetus to enclosure both of open fields and of common wastes from about 1760 onwards. The rate of progress is most easily shown by a few figures. In the reign of Anne there were three private bills for enclosure, in that of George I. 16, and under George II. 226, a total of 245 in fifty-eight years, while the sixty years of George III.'s reign show the astounding number of 3209 private bills as well as the general enclosing act of 1801. Unlike the enclosures of Tudor times, those of the 18th century were entirely in the interests of tillage. It is hard to estimate by how much the actual area brought under tillage was extended, since a great many enclosures affected open fields already under cultivation. In 1797, when over 1720 private bills had been passed, the select committee on enclosures reported that of the 46,000,000 acres which England was supposed to contain, about 7,800,000 were uncultivated wastes, while 1,200,000 were in the state of common fields, and it has been estimated that about 4000 parishes, containing open fields, chiefly in the eastern and some of the midland counties, out of a rough total of 8500, were enclosed between 1760 and 1844. Where such enclosures took place with due regard to common rights the gain was great, as the customary course of agriculture, and the difficulty of introducing changes such as machinery or a better rotation of crops, were almost insuperable obstacles to improvement. The enclosure of the wastes was also an economic gain, for in many cases they were previously worthless, the cattle reared on them were of an inferior kind, and, as Sir John Sinclair pointed out in an address incorporated in the report of the select committee of 1795, it was found more profitable to hire land for the breeding of sheep of a more valuable sort than to turn them on to a common for nothing. Nor must it be forgotten that though much suffering was probably inflicted, still it was a social gain to clear some districts of an idle and lawless population—the haunts of thieves who, more especially near the capital, were a public nuisance,—while the draining of vast tracts was not without beneficial effects upon the public health. In many cases the enclosures, as carried out, were hurtful to the labourers, whose cottages had been on the commons, and who had been able to keep a cow, which was no longer possible when enclosure of the open fields and of the waste deprived them of customary pasture rights—often without compensation. The expense of enclosing and the loss of pasture rights is one of the many causes which contributed to the disappearance of the yeomanry during this period. The force of the argument against enclosures lies in the fact that the poor did not in many cases receive compensation for the loss of traditional rights. The enclosure bills did indeed provide that all legal rights should be regarded, and on the whole the commissioners tried to act fairly, but the expense of enclosing was very great; much of the money compensation paid to the commoner was swallowed up in legal expenses, and the poor man was doubtless at a disadvantage in contesting the rival interests of a wealthy neighbour. After receiving reports from various select committees which had communicated with the board of agriculture, parliament in 1801 passed a general enclosing act (41 Geo. III. c. 109) with the object of cheapening and facilitating the process of enclosure, and of thus protecting the interests of the poor. By the act certain general provisions were laid down, which rendered the private acts shorter, though the expense of an application to parliament, and of referring contested cases to a parliamentary committee, still remained.

In 1836 an act (6 & 7 Will. IV. c. 115) was passed by which enclosure of common fields was facilitated. Possessors of common rights to the number and value of two-thirds might nominate commissioners to carry out enclosure of common fields, provided that these were beyond certain distances of the larger towns.

By the general enclosure act of 1845 (8 & 9 Vict. c. 118) this method was extended to the common wastes. An enclosure commission was appointed to deal with land of various kinds in England and Wales. (1) All lands held in severalty, or subject to definite common rights, could be enclosed by the authority of the commissioners without parliamentary sanction. By 15 & 16 Vict. c. 79, the commissioners were, however, forced to submit proposals dealing with land as above described to parliament. (2) All lands over which undefined rights of common existed—and all wastes within 15 miles of London, or within certain distances of other

towns. In such cases the commissioners held an inquiry, and then drew a scheme; all the schemes for the year being presented to parliament in one general act. The commissioners were thus substituted for the parliamentary committee, and it was hoped by the promoters of the measure that examination on the spot would prove a security to the poor, whose interests were directly protected by clauses empowering the commissioners to make allotments and recreation grounds. (3) Village and town greens, as well as the New Forest, and the Forest of Dean, were excluded from the operation of the act.

In 1852 parliamentary sanction was made compulsory for the enclosure of land held in severalty without definite common rights. In 1893 the statute of Merton, though not repealed, was greatly modified; and no enclosure may henceforth be made under that act without the consent of the board of agriculture, which in dealing with such proposals is instructed to carry out the requirements of the Commons Act of 1876, when considering applications for the general enclosure of a common.

[T. E. Scrutton, *Commons and Common Fields* (1887).—R. E. Prothero, *Pioneers and Progress of English Farming* (1888).—*Reports from Committees of the House of Commons*, IX., 1774-1802.—*Reports of the Board of Agriculture—General Report on Enclosures* (1805).—Notice of enclosures in Bacon's *History of Henry VII.*, p. 93, vol. vi., Bacon's Works, Ellis and Spedding's edition.—Leadam, *Inquisition of 1517 in Transactions of Royal Historical Society*, N.S., vi. 169]. W. C.

ENCOMIENDA, the name of the estates, comprising both land and its Indian inhabitants, granted by the Spanish crown to the *conquistadores* or military adventurers in America.

E. Ca.

ENCROACHMENT. See TRESPASS.

ENCYCLICAL. The encyclical of Pope Leo XIII. on the condition of labour, dated 15th May 1891, which is the subject of this notice, receives its name from its opening words *Rerum novarum*. Here, as in previous encyclicals, notably the one *Quod Apostolici Muneris*, issued in the first year of Leo XIII. (1878), the question of capital and labour is considered mainly in its connection with the recent advances of socialism. It offers us, as M. Charles Périn, emeritus-professor of the University of Louvain, puts it, a "synthesis of the economic order according to the divine laws which regulate human conduct," and it is important as constituting "la vérité catholique pour l'ordre économique," or, as we should put it, an authoritative statement on the part of the Roman Catholic Church on the economics of labour. Its distinguishing feature is the introduction of the principles of justice and charity in the solution of economic questions. The encyclical opens with an allusion to the "spirit of revolutionary change," and the influence of this in the "field of practical economy"; it dwells on the danger of social agitation in the presence of real grievances such as "the misery and wretchedness which press so heavily at this moment on the larger majority of the very poor," and the isolated and defenceless condition of working men, "the callousness of employers, and the greed of unrestrained competition" (*Encyclical Letter*, official translation, p. 4). It then proceeds to examine the remedies proposed on the one hand by socialists, which it condemns, and those which are within the province of the church and state, which it recommends, dwelling in conclusion on self-help by means of association and the importance of a wider diffusion of Christian charity in all human relationships which strikes at the root of all social evils. (1) The socialistic proposals are characterised as unjust and tending to rob lawful possessors, and putting the state into "a sphere that is not its own" (p. 5), and thus depriving the labourer of the liberty of choosing his own employer and using the proceeds of his work. Private property is defended, as against the socialistic recommendation of collective ownership as being "according to nature's law," whilst, "the authority of the divine law adds its sanction" (pp. 7, 8); and, considering the rights of the family as co-ordinate with those of the state "our first and fundamental principle, therefore, when we undertake to alleviate the condition of the masses, must be the inviolability of private property" (p. 11). The pope here falls into the common error of supposing that all private property is excluded in the schemes of modern socialism, whereas it is only instruments of production—private ownership in lands, capital, and machinery—which are to be abolished and become state property, the state directing the process of production, with the disappearance of the wages system in the socialistic state. (2) The encyclical declares inequality as in the nature of things permanent, and points out the methods of the church under these circumstances for remedying the evils arising therefrom. It is the duty of the church to teach and to train men in the principles of social ethics (pp. 18, 19), whereby the poor may learn "to suffer and endure" and to abstain from violent measures in compassing their ends, whilst the rich are taught to "religiously refrain from cutting down the workman's earnings, either by force, by fraud, or by usurious dealing" (pp. 13, 14). The church, too, in her institutions, as in the past, guards the "patrimony of the poor" by means of "deposits of piety" flowing from Christian self-sacrifice and charity. (3) The state as the organ of distributive justice protects each class with a view to the common good; all well-constituted states are bound "to provide those bodily and ex-

ternal commodities *the use of which is necessary to virtuous action.*" "It is only by the labour of the working man that states grow rich. Justice, therefore, demands that the interests of the poorer population be carefully watched over by the administration" (pp. 22, 23). Sunday rest, and the protection of health and the prevention of excessive labour of children and females being among the subjects demanding state interference, as also the restraint of the disturbers of social peace, "to save the workman from their seditious arts, and to protect lawful owners from spoliation" (p. 25). On the wages question Leo XIII. proves himself to be "le pape des prolétaires" in demanding of the state protection against unscrupulous employers, who under a semblance of free contract deprive the labourer of his due. Distinguishing between this theory and facts, between normal wages and fair wages, he points out that the working man, having nothing but his wage to fall back upon for a livelihood, is bound to come to terms with the master even to his own disadvantage, unless he is protected by the state or boards of conciliation authorised by the state to secure the rights of both parties of the contract, and this on the equitable principle that "each one has a right to procure what is required in order to live" (p. 28). (4) In the last place the pope recommends association and corporation as after the pattern of Christian confraternities under the fostering influence, though without undue controlling power, of the state as means of mutual support and protection against encroachments; but it is by a return to Christian faith and charity alone that the evils of society can be cured in the end,—so concludes the encyclical which thus becomes what Anatole Leroy-Beaulieu, in his appreciative study of *La Papauté, le Socialisme, et la Démocratie,* calls "un code de morale sociale" (see pp. 66, 67). But also, as the same writer points out, so far from coming into conflict with the principles of political economy, as now understood, the encyclical is on a line with its most recent developments (*ib.* p. 50), adding to the moral factor the religious forces without which selfishness and greed would be the only prompting motives of economic action.

[Charles Périn, *L'Économie Politique d'après l'Encyclique sur la condition des ouvriers,* Paris, 1891.—*Note sur le juste Salaire d'après l'Encyclique rerum novarum* by the same.—Henri Joly, *Le Socialisme Chrétien* under the head, *Les dernières écoles.*—Anatole Leroy-Beaulieu, *Papacy, Socialism, and Democracy,* trans. from the French by B. L. O'Donnell, Chapman and Hall, 1892, gives the text of the encyclical in an appendix.—Henry George, *On the Condition of Labour,* 1891.—Also W. T. Stead, *The Pope and the New Era,* 1890.] M. K.

ENDORSEMENT. See BILL OF EXCHANGE.

ENDOWMENTS. Adam Smith in a well-known passage[1] has written strongly on the subject of endowments. In his eyes they tend to hinder capital and labour from taking their natural course. In certain professions, notably that of holy orders, the existence of endowments, to encourage and support those who are preparing for them, has attracted large numbers of men who would otherwise have carried their energies into different fields. Hence a depression of incomes in those professions, for the number applying for employment in them is greater than the work requires. A change in circumstances since Adam Smith wrote has robbed his particular instance of much of its force, for the endowments in question have, as a rule, been diverted, and the growth of population coupled with well-defined religious revivals has greatly increased the work of the clergy. But Adam Smith goes farther, and maintains that, tested by experience, endowments have failed to secure any good object. The universities, he says, are largely endowed, and have failed to make any great additions to the learning of the country, which is no more than might have been expected *à priori,* for the motive to exertion being removed by the certainty of income independent of it, exertion itself would tend to diminish. Dr. Johnson,[2] though not accepting Adam Smith's conclusions, put the same argument in a popular form when he says, "Why, sir, we would all be idle if we could."

As the growing tendency of the present time is to employ endowments for the advancement of learning or the furtherance of education, it may be worth while to examine the reasoning at greater length. The objections to endowments may be put in the form of a dilemma—either a given result is worth having, and then the public are ready to pay for it, or the public is not ready to pay for it, and then it is not worth having; in the one case endowments are superfluous and cripple energy, in the other they are wasted. It will be observed that this argument is based on the assumption that the public are the best judges in such matters. To this it is objected that although the common exchanges of life may safely be left to competition, and the public are able to judge of quality in the matter of tea, sugar, etc., the case is very different when learning and the higher forms of education are involved. The public, or at least the English public, are not qualified to discern good and bad in such matters. The demand for books and teaching in the highest subjects is never likely to be sufficient to make it worth any one's while to write upon or teach such subjects as a profession, and many persons who have the ability and the taste requisite are powerless to pursue the subjects for want of

[1] *Wealth of Nations,* bk. i. chap. x.; cp. bk. v. chap i., art. ii.

[2] Boswell's *Life of Johnson,* A.D. 1776.

means. In such cases endowments, it is argued, may profitably be used to provide the means of subsistence for men who are in reality great public benefactors. Certain chairs, for instance, at the universities need endowments to support their holders in the absence of a sufficient number of students ready to pay fees to maintain their teacher. Certain forms of study and research are never likely to be sufficiently remunerative to provide those who pursue them with the means of livelihood, and must consequently be endowed. Outside these special cases it is readily granted that endowments, by making men independent of their exertions, tend to weaken their industry; but unless these particular subjects are endowed, the level of learning and of teaching is likely to be lowered, for the subjects studied and taught will be those, and those only, which bear directly on practical life. The question is not, perhaps, one which admits of a final answer. The enthusiasm which leads a man to adopt an unpopular subject may in many cases be trusted to keep him industrious, independently of reward. A certain habit of mind is observable in those who are mainly supported by endowments, a tendency to delay publication, an excessive self-criticism, a want of definiteness—all these go far to postpone, if not to destroy the realisation of the results of their work. It has been remarked that in this country a large amount of the best work has been done by men who have a regular employment, and with whom the advancement of learning is a secondary occupation. J. S. Mill, *e.g.*, wrote his principal treatises in the intervals of his work as a clerk in the India House. Grote's *History of Greece* was the work of a banker, and other instances might be quoted. In the great majority of cases a certain amount of teaching is a help and not a hindrance to research. The most successful use of endowments has, perhaps, been in cases where they have been employed to support men who have already made themselves a name in a subject, and who have been set free from the necessity of working for their daily bread at some occupation which they have hitherto practised. But the method of distributing endowments is distinct from the question of their inherent advantages or drawbacks. In German universities endowments are, as a rule, only a part of the income of a professor, the proportion that he earns by fees being greater or less as his subject is popular or the reverse.

Apart from the encouragement of research, endowments are largely used to forward the higher education of the country. The universities expend large sums annually in scholarships to attract students; and fellowships, being now largely used as prizes at the end of a university course, are additional inducements to students to undertake it. The consideration of poverty enters but little into their distribution. Here again a question may be raised as to the wisdom of such a policy. Studies, it will be urged, which are not self-supporting in the sense of attracting students by their own charms, are not worth supporting at all. Others will hold that studies which do not bear directly on practical life (in German phrase are not "bread studies") have a value of their own, of which the public are not the best judges, but which make it worth while to support them by endowments; and that while studies which are a direct preparation for business may safely be left to themselves, it is the interest of a country to preserve others from extinction. We have in England no logical principle applied to the graduation of studies or their mutual relation; but the tendency of the present day is to use endowments largely to facilitate the passing from the lower to the higher grades. Instances are not wanting of those who by their means have risen from elementary schools to high places in the universities. In practice it must be owned that endowments often (1) cheapen education for a class who can perfectly well afford to pay for it, by providing plant, etc., for the great public schools and the universities; (2) enable poor men to live at a needlessly expensive rate, which is determined by the standard of comfort set by more wealthy companions.

Two subsidiary points may be mentioned.

1. The system of confining the advantages of endowments to certain localities is being gradually modified. It is argued that migratory habits and facilities of communication have greatly lessened the reality of local divisions; that, on the whole, every locality gains by the process; that waste is avoided, and the supply of endowments made to correspond more nearly to the number of persons qualified to make a good use of them.

2. The abolition of any poverty qualification, mentioned above, has been severely criticised. It may be defended on the ground that it is almost impossible to make such a qualification real. Poverty is difficult to define, and it is impossible to formulate any system of compensation as between ability and want of means. Moreover, on the whole, the present tendency to distribute endowments by competition, making ability and not poverty the test, tends to raise the whole level of education, and so to benefit the poor; whilst the spur of poverty is sufficient to ensure industry, and the temptations to idleness which go with wealth are, in the great majority of cases, strong enough to prevent members of the wealthy class from competing successfully.

[Mill, *Pol. Econ.*, bk. v. chap. xi. § 15.—Turgot, *Fondation et Fondations*, Œuvres, vol. iii., ed. 1808.]

L. R. P.

ENEMY GOODS. In early times the pro-

perty of the enemy, wherever found, was liable to capture. By custom and treaty the harshness of this rule has been modified, and the modern practice may be summed up as follows:—(1) Movable property belonging to an enemy state may be appropriated; immovable property may be occupied but not alienated. (2) Movable private property is liable to contribute to the support of the invading army, contributions and requisitions being levied for that purpose; immovable private property is exempt from appropriation. (3) Private property on the high seas is liable to capture except where it is on board a neutral vessel. (4) Private property within the jurisdiction of the belligerent is not as a rule liable to capture.

[See CONTRABAND, DECL. OF LONDON, DECL. OF PARIS.—*International Law*, by W. E. Hall, Oxford, 1890. Many writers advocate the exemption of private property at sea from capture. In some modern wars this principle has been followed. See De Laveleye, *Du Respect de la Propriété Privée en Temps de Guerre.*—Bluntschli, "Du droit de Butin," *Rev. de Droit International*, tom. ix. and x., and articles in the same review by M. Vidari, tom. iii. (1871).—M. Gessner, tom. vii. (1875), and the reports presented to the Institute of International Law, tom. viii. (1875).] J. E. C. M.

ENFACED PAPER OR RUPEE PAPER. The title applied by stock exchange custom to Indian government securities, the interest on which is payable in silver rupees. The capital also is expressed, or enfaced, on the certificate as being so many silver rupees, the value of which in the London market varies according to the value of silver in relation to gold. The word "enfaced" might almost as well be applied to any other kind of security, inasmuch as all have more or less on their face a description of the security represented. Custom, however, has lent the word simply to those Indian rupee stocks which bear interest at 4 per cent and upwards, the interest of course being payable in silver, and subject to an increase or decrease in sterling value according to the value of silver in the bullion market. The Indian government cannot borrow so easily or at so low a rate of interest in silver as it can in gold, the mass of investors having been repelled by the possibility of fluctuations in the sterling value of the interest receivable. At the same time it has been thought well by Indian statesmen to avoid accumulating a large sterling debt, lest the Indian government should some day encounter a heavy fall in the value of silver, which would compel it to tax the natives of India to the extent that more rupees would be required to provide each pound sterling. A. E.

ENFACEMENT is the converse to endorsement (see BILL OF EXCHANGE). The word does not appear to have been in use before the year 1858, when the Indian Government decided to pay the interest on the Indian home debt in London by means of drafts at sight on India, and issued the following notification:—

"When holders of notes in Calcutta desire that the interest thereon should be made payable by bills issued in London, they must present their notes at the office of the Accountant-General to the Government of India, where an enfacement will be made on each of the notes in question as follows: *Interest payable in London by draft on Calcutta* (or Madras, as the case may be)."

[Geo. Clare, "Stock Exchange Securities," *Journal of the Institute of Bankers*, vol. xiv. p. 226.]

ENFANTIN, PROSPER, called "Le Père" (1796-1864), was born at Paris and died in the same city. Having first been, in conjunction with BAZARD (*q.v.*), a leader, he became, after Bazard retired, the sole chief of the St. Simonians, and did his utmost to promote the success of that economico-religious sect, up to the date of its fall. Commencing as a devotee of mysticism, Enfantin finally adopted the doctrine of "free love"; this brought him into trouble with most of his fellow-religionists. He was condemned on 28th August 1832 by the assize court of the department of the Seine, in company with Charles Duveyrier and Michel Chevalier, to a year's imprisonment and a fine of 100 francs, for having assisted, without previously obtaining permission, in the formation of an association consisting of more than twenty members, and in the promulgation of articles injurious to public morality.

The penalty was before long commuted, and Enfantin made his way to Egypt, where he studied the question, now long since settled, of piercing the Isthmus of Suez.

Subsequently, after remaining for several years at Tain (Drôme), he returned to Paris, and was appointed, in 1845, a director of the first company for constructing a railway from Paris to Lyons.

After the revolution of 1848 he founded, in conjunction with Charles Duveyrier, the journal *Le Crédit*, which continued to appear till 1850. Finally Enfantin became the administrator of the second Paris, Lyons, and Mediterranean Railway Company—a post which he continued to hold till his death.

Before the fall of the St. Simonian School, Enfantin published, in conjunction with others, *Doctrine de St. Simon, Exposition*, 2 vols. 8vo, 1830-32; afterwards, in his own name, *Économie politique et Politique*, 1 vol. 8vo; *Morale*, 1 vol. 8vo, etc. After the dispersion of the St. Simonian School, Enfantin wrote a volume, *Colonisation de l'Algérie*, 1843, 8vo, in this, across a web of original ideas and among passages which show deep historical study, may be traced the opinions of the early socialists.

His works were collected by zealous disciples, and printed in 9 vols. 8vo, 1866-73. A. C. f.

ENFRANCHISEMENT, the liberation of the serf from his forced astriction to his lord's estate, and his forced labour for his lord's behoof. Though not liable, like the slave, to be sold from master to master, or to give his whole time to his master's work, the serf was still practically chained to the estate to which the right to his labour was legally appendant, and he could still be compelled to his work by whips or imprisonment at his master's will. There was a third strand in his bondage—his subjection to his lord's civil and criminal jurisdiction, which left him defenceless against arbitrary exactions, and therefore operated often quite as injuriously on his economic position as the other two, but it was not felt to involve the same personal indignity as they did, and the serf is commonly considered enfranchised when he is released from them, although he may continue subject to his lord's general authority. Enfranchisement has proceeded perhaps more generally from moral than from economic motives, but it has usually justified itself immediately, and always eventually, by bringing with it a decided economic advance. The pinch of serfdom was the forced labour; when that was commuted to a money payment the astriction to the estate fell away of itself, for want of any practical reason for enforcing it longer. But though the astriction to the spot was less grievous to individuals—except indeed among the Russian peasantry, whose chief complaint, Haxthausen tells us, always was that it restrained their idle propensity to rove—it was always most pernicious to the progress of the community, because it stopped all division of labour, limiting occupations to the little round of work in a rural village, and preventing the rise of towns, and trade, and manufactures. Russia consequently, where serfdom was only abolished in 1861, is still, in spite of the acknowledged industrial gifts of its people, little more than a vast nation of crofters, every man half indifferent agriculturist and half indifferent tradesman; and even in agriculture, though it is now one of the largest exporters of grain in the world, its system of husbandry continues almost primitive, and there has never arisen a modern farming class with the requisite skill and capital for practising improved methods. The ill effects of the forced labour were always more directly obvious. The serf who got a small holding to cultivate for his own support, but was obliged to give three days a week (the usual quota) to his lord's work, could neither do justice to his own fields nor to his lord's,—not to his own because he was called away from them precisely when he most required to be upon them, and not to his lord's because he gave his labour reluctantly, sometimes with bitter ill-will, and he had no interest except to give as little of it as he dared. His holding is sometimes called the wages for his labour, and his labour the rent for his holding; but that was a bad form of wages, because it repressed instead of encouraging the labour it was supposed to reward, and this was a bad form of rent, because it interfered with the proper cultivation of the land which was supposed to yield it. Serf labour, like all discouraged labour, was habitually indolent. Professor R. Jones was informed by the English engineer who superintended the making of the road from Hamburg to Berlin in 1830, that the Prussian free labourers he employed broke thrice as much granite in the day as the Mecklenburg serfs, and that when he tried to animate the latter by mixing them in the same gangs with the former, the experiment failed because it had exactly the contrary effect of making the free labourers slacken their exertions to the bond pace (*Distribution of Wealth*, p. 52). The peasants on Russian state lands, whose labour rents were commuted into money rents long before the universal emancipation, are much more energetic, enterprising, and prosperous than the recently-emancipated serfs (Thun, *Landwirthschaft u. Gewerbe in Mittelrussland*, p. 43). Roscher quotes two authorities who made personal investigations into the relative industrial capacity of serf and free labourer in the same communities, and one—Jakob—counted two free labourers equal to three serfs, while the other—V. Flotow—counted three free labourers equal to four serfs (*System d. Volkswirthschaft*, i. 152). The difference is still more strikingly shown by Hanssen, who mentions that on the estate of Rixdorf in E. Holstein, where labour rents were commuted in 1780, it required ninety-two horses and seventy-five men to work the home farm before the commutation, and only thirty-six horses and fourteen men after it (*Aufhebung der Leibeigenschaft in Schleswig u. Holstein*, p. 39). Usually, too, though the labourers were fewer the harvest was greater. The eminent Danish statesman, Count J. H. E. von Bernstorff, finding he could not with serf labour make his property yield enough to pay the taxes, freed the serfs in 1767, paid them wages for the work they did, and obtained a net return of £150 a year (Sugenheim, *Gesch. d. Aufhebung d. Leibeigenschaft*, p. 500). Storch mentions that he nearly tripled the production of his estate by this enfranchisement, raising his product of rye in the ratio of from 3 to 8¼, of barley from 4 to 9¼, and of oats from 2⅜ to 8 (*Cours d'Économie polit.*, iv. 306).

In factory work it has been generally found impossible to employ serf labour remuneratively at all. Haxthausen found some old serf factories in Russia during his visit, but they were in a very languishing condition, and most of the Russian manufacturers, though they had generally begun with their unemployed domestic serfs, and then changed them for some of their agricultural serfs who were stronger, had all in the end to learn the same secret—that the

Russian was a bad workman when he worked on compulsion, but became an excellent workman when he worked for hire. Force extorts but the minimum of effect; it is hope that draws out the maximum. They consequently set their serfs free, imposed a small annual charge as commutation duty, and engaged them in the ordinary way for wages (*Russian Empire*, i. 110), precisely as Storch says had been done in Moscow factories as far back as 1805 (*Cours*, iv. 30).

Enfranchisement has occasionally resulted ill, but that has been due either to moral defects in the particular individuals or groups enfranchised, or to the excessive burden of the compensation dues or other conditions of the enfranchisement. Freedom necessarily contains the possibility of doing worse as well as the possibility of doing better. J. G. Kohl repeatedly came across villages in Little Russia with free peasants living on one side and serfs living on the other, and he always found that while the most prosperous inhabitants of the village were among the free peasants, so also were the most miserable (*Reisen im Innern von Russland*, ii. 300). On the Zamoiski estates in Poland, enfranchisement seems to have had a curious double action; it tripled the production on the proprietor's fields (Cox, *Travels in Poland*, i. 22), but it had a bad effect on the serfs' own, because they became drunken and neglected their work (Burnett, *Present view of Poland*, 106). The great Russian emancipation of 1861 is the most notable example of the natural and good operation of enfranchisement being vitiated by concomitant economic and social conditions. J. R.

ENFRANCHISEMENT OF LAND FROM COPYHOLD AND SIMILAR TENURES, HISTORY OF. The enfranchisement of copyhold lands in England has passed through three stages. It is necessary for the purpose of tracing its history to consider (1) enfranchisement at common law; (2) voluntary enfranchisement under the copyhold acts 1841-1887; (3) compulsory enfranchisement under the copyhold acts 1852-1887.

1. Enfranchisement at common law. Copyhold lands and lands of similar tenure must, according to the law of England, be "parcel" of a manor, or in other words, wherever lands are held by copy of court roll, the freehold in those lands is in other hands than those which hold the "copy." The process of enfranchisement unites, in the hands of the copyholder, the freehold and the copyhold interest. It is evident that nothing short of the whole freehold interest will suffice to clear the land of all its copyhold incidents, and therefore an enfranchisement at common law may be effected "by any lord entitled to the manor in fee simple, or who has a power to enfranchise or a power of sale and exchange," but it cannot be effected by a lord with a more limited interest or less extensive powers. An enfranchisement, therefore, before the year 1841, was carried out through a conveyance of the fee simple of the copyhold in question, from the lord of the manor to the tenant for an agreed price. The fact that the tenant himself had only a limited interest in his copyhold estate did not affect the validity of the enfranchisement, which would enure for the benefit of the estates of those who succeeded him. Unless special provisions were inserted in the conveyance, three somewhat unexpected results would follow from the enfranchisement. (1) That the mines and minerals would pass from the lord to the copyholder; (2) that the copyholder's rights of common in the "waste" of the manor would be extinguished; (3) that all mortgages, or other incumbrances affecting the lord's title, would affect the enfranchised lands in the hands of the quondam copyholder. It will be readily understood that the difficulties attending enfranchisement, under such conditions, rendered the conversion of copyholds into freeholds a cumbrous and costly process.

In 1802 we find, in the Land Tax Redemption Act, provisions which enable owners of limited estates in manors to make enfranchisements for the purpose of obtaining money for redeeming the land tax. This appears to be the first indication of the principle subsequently worked out in the copyhold acts.

2. In the year 1841 was passed the first of the acts which "provide the means for an adequate compensation for the rents, fines, and heriots payable to the lords of manors, in respect of lands of copyhold and customary tenure, and for facilitating the voluntary enfranchisement of such lands, and for improving such tenure." This act created a body of commissioners called the copyhold commissioners, now the land commissioners, whose consent and approval must be obtained to enfranchisements made under the act. Under this protection the legislature felt itself enabled to give authority to the lord of any manor, "whatever may be his estate or interests therein," to enfranchise "all or any of the lands holden of his manor," and to any tenant, "whatever may be his estate and interest," to accept such enfranchisement. The consideration was payable in money, but by agreement such money might be made payable at a future time. Whenever the lord who enfranchised had a limited interest only, the money, so soon as it was paid over, was to be invested, and to be subject to the same trusts as those affecting the manor to which the enfranchised copyhold had previously belonged. It was now enacted that any rights of common belonging to the land enfranchised should continue to be attached thereto after it had become freehold, and that the lord's right to

mines and minerals, under the enfranchised land, should not pass upon the enfranchisement unless expressly commuted. Upon payment of the sum payable for enfranchisement, the tenant was authorised to charge it upon the lands enfranchised, with all the powers and rights of a first mortgagee. Finally, the title to the enfranchised copyholds was to be separated for ever from the title to the manor.

By this act, therefore, three of the main impediments to general enfranchisement were done away with; for (1) it was no longer necessary to obtain the conveyance from an absolute owner; (2) it was no longer necessary expressly to reserve the lord's mines and minerals and the tenant's rights of common; and (3) the enfranchised copyholder had nothing to fear from any encumbrances clogging the estate of his former lord. But enfranchisement still remained a matter of agreement, and could not be forced upon an unwilling lord. Amending acts are a sure sign that a statute is not a dead letter, and the Copyhold Act of 1841 was followed by those of 1843 and 1844. The act of 1843 provided that the consideration for enfranchisement, which under the act of 1841 was a lump sum of money, might in future be paid wholly or in part by an annual rent charge, or might take the shape of a conveyance of lands forming part of the manor to which the enfranchised lands had previously belonged. The act of 1844 extended the last-mentioned provision to any lands which, in the opinion of the copyhold commissioners, could be conveniently held with the manor to which the enfranchised lands had previously belonged, although themselves not belonging to such manor.

These three acts of 1841, 1843, and 1844, constituted a short code under which voluntary enfranchisement could be satisfactorily carried through. But it was not until 1852 that compulsory enfranchisement became possible for either lord or tenant.

3. The system of compulsory enfranchisement, which was inaugurated by the Copyhold Act of 1852, was applied in the first instance to those copyholds only to which a new tenant was admitted on or after 1st July 1853, or in other words, so long as an existing estate in the copyhold continued to subsist, neither lord nor tenant could force an enfranchisement upon tenant or lord. But six years' experience of the act of 1852 enabled the legislature to extend its provisions to all copyholds whenever the last admission had been made to them.

The key-note to the system of compulsory enfranchisement is valuation of the lord's interest by independent valuers, under the supervision of the copyhold commissioners. The difficulty which compulsory enfranchisement had to deal with was the amount of compensation to be paid to the lord in respect of fines and other sources of profit to which, if the copyhold interest continued, he would become entitled at uncertain intervals, and which, upon enfranchisement, required to be turned into money once and for all. Without going into the meaning as to "the lord's fine," it may be sufficient to say that such fines are payable when a new tenant is admitted, that is, entered upon the court rolls as the person holding the copyhold tenement "according to the custom of the manor." Originally the price given to induce the lord to accept the new tenant, the fine, was in its nature arbitrary and uncertain, and depended in each manor upon the custom of that particular manor. But the courts of the king had, at an early date, established that the courts of the manorial lords could not by custom give efficacy to unreasonable fines, and in course of time developed the working rule that "two years' improved value of the land, after deducting quit-rents," was the maximum amount which the lord of a manor should be entitled to receive upon the admission of a new tenant.

How then does the act of 1852 meet this problem? In the first place all fines and other manorial dues, payable upon the admission, which under that act supplies the opportunity for enfranchisement, are to be discharged before any further step is taken. Then the valuers, or their umpire, or the single valuer agreed upon by lord and tenant, must ascertain the value of the manorial rights now exercised for the last time. The valuation, when made, must take the form of an award, must be confirmed by the copyhold commissioners, must be registered at the office of the commissioners, and must be entered upon the court rolls. The amount of the valuation, failing agreement, is to be paid by the tenant in a lump sum, if he has claimed the enfranchisement; but if the lord has insisted on the change of tenure, the compensation will, in the absence of express agreement, take the form of an annual rent-charge. In either case the "enfranchisement consideration" is a first charge upon the lands enfranchised.

Two provisions of this act are noteworthy, as showing the caution with which the legislature introduced compulsory enfranchisement. Firstly, power is given to the lord to buy out the copyholder compulsorily if he can show, to the satisfaction of the commissioners, that his "mansion-house, park, garden, or pleasure grounds," may suffer from the tenant's enlarged powers of dealing with the lands which are ceasing to be copyhold. Such a power might well be granted to the lord if the tenant threatened to open a marl pit or cut down standing timber upon land with which he could not so deal whilst still a copyholder. Secondly, if it be found at any time that the person who

purported to enfranchise was not the lord at all, it is provided that the true lord is to recover the consideration for the enfranchisement from the person who wrongfully received it, instead of forcing the tenant to pay the money again and look to the wrong-doer for compensation.

Valuers acting under the Copyhold Act 1852 must take into consideration "facilities for improvement," as, for example, the possibility that the land may become building land, and the hindrances to such improvement, as, for example, the probability that it will not become building land for some years.

The Copyhold Act 1858 is to the Copyhold Act 1852 what the Copyhold Acts 1843 and 1844 are to the Copyhold Act 1841. It contains such improvements as the working of the principal act had suggested. Thus for the deed of enfranchisement specified by the act of 1852, which the parties would execute, was substituted an award of enfranchisement to be made by the copyhold commissioners; owners of at least two-thirds of the value of copyholds held in undivided shares, obtained the power to insist on an enfranchisement whatever their co-tenants might desire; and one form of certificate of charge was provided for securing the payment of consideration money, compensation money, and expenses of enfranchisement, as the case might be.

Speaking generally, the costs of a voluntary enfranchisement are paid in manner agreed by the parties, or, failing agreement, are paid as directed by the commissioners; while the costs of a compulsory enfranchisement are to be paid by the party who has insisted upon abolishing the copyhold tenure.

In 1887, after an interval of thirty years, an act was passed "to make further provisions for enfranchisement" of copyhold lands. An important provision of this act is that the steward of any manor, when a new tenant comes for admission to a copyhold, must hand to such tenant a notice stating that he is entitled, if he desires, to enfranchise the copyhold. A further provision of great importance prevents the lords of manors from making grants of portions of the "waste" of their manors. Again, the tenant may pay the compensation for an enfranchisement on which he has insisted by means of a rent-charge of 4 per cent of the amount of compensation. Finally, the compensation to the steward of the manor is fixed by a schedule to the act, and the land commissioners are directed to "frame a scale of compensation" such as "will facilitate enfranchisement." The scale published in conformity with this act comprises a table in which is calculated the number of years' annual value payable to the lord, according to the age of the tenant, as compensation for the loss of future fines. An act, consolidating all earlier legislation, was passed in 1894, under which both compulsory and voluntary enfranchisements are now effected. The powers formerly in the hands of the land commissioners are now exercised by the Board of Agriculture, whose consent must be obtained both for voluntary and compulsory enfranchisements. The latter are effected by an award made by the Board, and the Board directs the valuation for compensation. The party demanding the enfranchisement must bear the expense. The tenant has in all cases the choice of paying the compensation either in a gross sum or as an annual rent charge, but when the lord is the compelling party, the compensation is paid as a rent charge unless the tenant desires otherwise.

Enfranchisements on crown lands, church-lands, and university and college lands, are the subject of special statutes.

[Brown, *Copyhold Enfranchisement Acts*, 1888.—Scriven, *On Copyholds*, 6th edition, 1882.—Elton, *Law of Copyholds*, 1898.—See COPYHOLD.]

ENGLISH EARLY ECONOMIC HISTORY.—In the present state of historical investigation, it is difficult to give a complete account of the development of political economy in England. Many writers have devoted attention to the subject, and reached important conclusions, but comparatively little use has been made of the vast stores of material relating to the later middle ages, and the rise and fall of the mercantile system. Particular movements have indeed been carefully investigated, and we are not without indications of the general course of development. To take an illustration from mathematics, certain points on the curve of development have been ascertained; we have some idea of its shape; we know also that the English curve is only one of a large family of curves, other members of which may be found on the continent. But of its direction between the points ascertained, and of the differences between it and others of the same class, we know little.

The subject may be best approached by considering the influence of the mediæval church. Before the conversion of the Anglo-Saxons to Christianity there was little commerce, but Christian merchants resorted to England while the inhabitants were still pagans, and so brought them into contact with a more highly developed economy than their own. Many of the principles which we find in mediæval economic teaching may probably be traced back to this or an earlier period; for example, the idea of money as a *pledge*, which exercised an important influence on economic doctrine in England far into the 17th century. Neither the condemnation of avarice nor hostility to usury was peculiar to Christianity. The social system of the middle ages, greatly modified as it was by Christian teaching, had its foundations in a pre-Christian state of society. But making

every allowance for the influence of ideas and customs derived from earlier times, the fact that the new religion obtained a firm hold on the population while industry and commerce were still in their infancy, is of primary importance in tracing the development of political economy. Early economic institutions and laws are stamped with the teaching of the church. Subsequent modifications of doctrine are largely the outcome of the struggle, on the part of the church, to guide or control new economic forces as they gradually came into operation. To follow rightly the course of development it is first of all necessary to understand the position of the church with regard to trade and industry.

From the earliest times the church had had forced upon it the duty of applying the principles of Christianity to social life. Outside Palestine the earliest converts were found in the busy trading centres of Asia Minor ; and the first persecutions were probably due to the fact that the new religion threatened various trading interests, and tended to the overthrow of the existing social system (Ramsay's *Church in the Roman Empire*, pp. 12, 199, 200, etc.). But the church was hostile to the ordinary usages of the world only in so far as they were in conflict with the ideal of Christianity, which supplied a standard by which all actions in the economic sphere could be tested. Everything inconsistent with the profession of Christianity was condemned, and uncompromising obedience to its precepts was enjoined. The process of applying Christianity, in changing or widely differing social conditions, went on in the earlier centuries of the Christian era and throughout the middle ages. The work of the church was not so much to introduce new principles of action as to test those already known, assimilating those which were not hostile to Christianity, and giving them new significance when considered in the light of the Christian faith.

The pursuit of gain as an end in itself was obviously inconsistent with Christianity, and the condemnation of avarice in every form is one of the most striking characteristics of the teaching of the church. This may be regarded as the fundamental principle of mediæval economics. Its different parts are so closely interwoven with each other that we can without much difficulty reconstruct the whole system from any one of its elements. Closely bound up with the condemnation of avarice was hostility to many methods of acquiring wealth which have since been adopted by civilised communities, and chief amongst those forbidden methods was USURY (*q.v.*), the objection to which extended to all forms of investment for the sake of gain. But the general teaching of the church would have had comparatively little influence but for its wide and far-reaching application of the principle of association. The interests of the individual were subordinated to those of the community. The duty of helping those in need, and the brotherhood of all Christians, were insisted on. It was this side of the teaching of the church (see CHRISTIANITY AND ECONOMICS ; CHURCH, THE MEDIÆVAL) which accelerated, if it did not initiate, the formation of gilds and other associations, and ultimately led to the creation of the elaborate system of the middle ages for the regulation of trade and the restraint of competition. Insistence also on a just or reasonable price for commodities, the approximate determination of which was easier in this early stage of industrial development than it would be in modern times, led to numerous laws framed with a view to realising that object. It may be noticed as evidence of the hold which mediæval doctrines obtained, that the expression "just price" (JUSTUM PRETIUM), interpreted to mean that price which most closely approximated to cost of production, was used as a synonym for "cost price" as late as the end of the 16th century.

(*Vide* R. RECORDE'S *Grounde of Artes*, 1543, frequently reprinted and edited by Dr. Dee, John Mellis, Robert Norton, and others.)

The early hostility of the church to usury was based on the biblical records and on the authoritative declarations of the Christian fathers and the councils. Had the church maintained its original attitude there can be no doubt that its influence would have seriously hampered economic development. It became impossible, however, to regard with hostility many of the new methods of acquiring wealth which appeared with the extension of trade and commerce, and thus began one of the most interesting movements of thought of the middle ages, viz. the adaptation of the principles of Christian teaching on the subject of lending and borrowing to the needs of a changing environment. This process begins about the twelfth century. The canonist writers, on the one hand, endeavoured to separate the essential from the non-essential elements of the doctrine of usury, and to apply it to mercantile transactions, strengthening their position by appeals to ARISTOTLE'S doctrine of the barrenness of money, the conception of *natural law*, and other arguments ; while, on the other hand, merchants and traders, anxious to escape the "censure of usury," appear to have been not unwilling to submit to decisions which, on the whole, did not seriously hamper freedom of investment. *Bonâ fide* credit agencies, bills of exchange, loans for trading purposes, the payment of interest whenever the lender could show that the loan would result in "certain gain lost" or "actual loss incurred," rent charges, partnership, loans on bottomry, and other expedients for securing a return for the investment of capital, were gradually approved by the canonist writers, and the outcome of the movement was that the doctrine of usury was stripped

of everything likely to prove an obstacle to the practice of ordinary business methods.

Such was the course of movement on the continent. But for the present we are only entitled to say that there was a general similarity between English and continental opinion during this period. No doubt many passages may be quoted from English statutes which appear to be suggested by the canon law. The influence of the church was great, and the trading classes would not lightly risk excommunication for the sake of gain. "Goods lost, nothing lost; credit lost, much lost; soul lost, all lost," is an old proverb; and even as late as 1486 Pope Sixtus IV. thought it worth while granting to the inhabitants of the Channel Islands "the help and authority of the church by interdict, anathema, and other forms of censure, for the repression of piracy, robbery, and violence" (*Materials for history of the reign of Henry VII.* (Rolls series) i. 280). The ordinary teaching of the church, whatever may have been its practice, was hostile to avarice and covetousness (*vide*, for example, the homily in *Ashm. MSS.* 750), and occasionally the influence of the GILDS (*q.v.*) may have been favourable to the rule of the CANON LAW (*q.v.*) [*Ordinances of the Gild of St. Leonard, Lynn*, Toulmin Smith's collection, p. 50]. The usury laws also were enforced and had the support of the trading classes (*Liber Albus*, ed. 1861, 318, 319, 339). But such evidence enables us to say only that there was a general similarity, which indeed we should expect, between England and the continent; and in the development of economic doctrine the points of difference are of equal if not of greater importance. The backwardness of investigation prevents us from dealing with the latter with any completeness of detail. The following, however, may be noted. Neither the canon law nor the civil law was received in England as authoritative "except educationally, and as furnishing scientific confirmation for empiric argument." (Stubbs, *Lectures on Mediæval and Modern History*, 307.) The canonists, however, claimed that "a suit might be brought in the ecclesiastical courts for every matter which was not cognisable in the courts of secular law, and for a great many matters which were so cognisable" (*ib.* 316), and there was a long conflict on the subject. The system of rent charges was not generally prevalent in England, and *montes pietatis* were never established (see MONT DE PIÉTÉ). An attempt to introduce the latter was made without success, by Gerard MALYNES, early in the 17th century (*Lex Mercatoria*, 1622). The economic legislation of the 14th and 15th centuries was largely empirical. In the regulation of foreign trade especially, and in the organisation of the customs, the measures adopted were mainly determined by the fiscal necessities of the government, and we can see very early the tendency to subordinate trade to the exigencies of foreign diplomacy (*e.g.* in the relations between England and Flanders) which became so prominent a feature of later commercial development. Councils of merchants were summoned by Edward I. and Edward III. to advise with them on questions of trade (see Rymer, *Foedera* (1821) vol. ii. pt. v. 1057). The general impression we get from a study of the legislation of this period and from such arguments as are recorded in the Rolls of Parliament, is that many of the measures adopted were tentative and experimental. To understand therefore the economic ideas of the time we must examine closely the statutes and institutions in which they were embodied. Such were the statutes regulating wages and prices, the organisation of the crafts, the staple system, restraints on the exportation of bullion, statutes of employment, and usury laws. We may notice the following points: (1) The movement of thought on the subject of usury was slower in England than on the continent. (2) Financial methods well known on the continent were not introduced into England until comparatively recent times. The discussion, therefore, of various credit agencies which did so much to modify continental opinion was scarcely possible in England. (3) The impression prevailed —with what reason it is unnecessary here to discuss—that the staple system, while imposing certain regulations on all merchants alike, was not unfavourable to freedom of enterprise. (4) Money, so far from being subject to the same laws as other commodities, was supposed to be essentially different from them. It was, in fact, not a commodity at all, but a *pledge, a medium of exchange*, circulating under the authority of the prince or commonwealth, its value determined solely by that authority. The first appearance of those forces which were destined to break up the mediæval system should be noted. In the reign of Richard II. we have the first navigation act; then the beginning of various trading companies, especially that of the merchant adventurers (see ADVENTURERS, MERCHANTS; NAVIGATION LAWS).

We are now in a position to trace the subsequent development of economic doctrine in England. The reign of Henry VII. was of great importance in the economic history of the country, and its industrial and commercial progress very soon brought about far-reaching changes in economic ideas. From the middle of the 16th century onwards there were few years in which some book or pamphlet was not published on subjects of economic interest, and such works may be reckoned by thousands. It is difficult to draw a sharp line of division between economic and non-economic publications. We shall, however, keep as closely as possible to the main line of development of doctrine, and in a later section indicate the relation to it of other currents of thought.

English statesmen and writers in the middle

of the 16th century had to face the most difficult economic problems which could possibly be submitted to them. The mediæval system for the municipal control of trade was unsuitable for the regulation of the new economic forces which the extension of the domestic system, especially in the woollen industry, brought into operation. The decay of tillage, and the growth of enclosures, appeared to threaten the country with the evils of depopulation, as well as a great increase in poverty. The social changes induced by the reformation seemed to be equally momentous. In relation to foreign trade, the loss of Calais inflicted a death-blow on the staple system, and the withdrawal of the privileges of the Hanse merchants injured the interests of a section of English merchants, although it left the way clear for the development of a national foreign trade by the merchant adventurers. In the growth of industry and commerce these difficulties were inevitable. There must have been great disturbance and loss to some classes, but in time the country would have settled down to the new conditions. The evils, however, of the period of transition were aggravated by a currency problem of the first magnitude. The debasement of the coinage under Henry VIII. and Edward VI., coupled later on with the influx of the new silver from the American mines, led to a rise of prices without parallel in the history of the country. The evils of the debasement were felt especially by the landed interest, the government, and the working classes. It is important to keep these facts in mind, for they formed the subject-matter of the earliest economic literature. One treatise—the *Briefe Conceit of English Policy*, attributed to William Stafford, and published in 1581, but really written by John Hales about 1549 (*Eng. Hist. Review*, vi. 284)—deals with these questions as a whole, and sums up the aims of the government at this time. The writer shows a clear insight into the causes of the high prices; his work is invaluable as a storehouse of information, and in it we have a broad outline of the theory of the balance of trade, which was elaborated in the following years. The *Briefe Conceit*, however, scarcely enables us to trace distinctly the relation between the opinions which have already been described, and later economic doctrine. To do that we must go to the history of the merchant adventurers.

With the growth of their trade, the merchant adventurers naturally adopted means of avoiding the transmission of bullion, such as bills of exchange, which had long been in use for certain transactions. Until the middle of the 16th century all went well, but then the fluctuations in the ratio of exchange between London and Antwerp, and other places, brought into prominence the usurious aspects of bill discounting, and the opponents of the merchant adventurers attributed the rise in prices to their practices. It was commonly believed that it was within the power and the exclusive right of the government to fix the rate of exchange, and thus determine the prices of commodities. We cannot here detail the circumstances which gave rise to this theory. It must suffice to say that when it arose it was not altogether absurd; there was much in the ordinary practice of merchants to give some show of truth to the theory; and it was closely bound up with the doctrine of usury. From the middle of the 16th century until late in the 17th it was advocated in pamphlets, and pressed upon the attention of the government, which was really uncertain how to act. It was the basis of the charge of usury, which was one of the most usual arguments against the merchant adventurers (*vide* the *Treatise on Exchange*, 1564, printed in Milles's *Customers Replie*, 1604), and the economic world was divided into two opposite camps — the bullionists, represented by the advocates of the Staple System (*q.v.*), and the newer mercantile school represented by the merchant adventurers and their supporters. In his economic works, nine in number, though only five survive, Thomas Milles, head customer of Sandwich, undertook the defence of the staple system, and denounced the monopolising tendency of the merchant adventurers. In his *Customers Apology* (1601), we have a curious anticipation of Adam Smith's canons of taxation, and one of the earliest instances of the claim for free trade based upon the theory of natural rights (cp. Report from the Committee on the Free Trade Bills, 1604, *Journals of the House of Commons*, ii. 218-221. The monopoly of the merchant adventurers was "against the natural right and liberty of the subjects of England.") The attacks on the company called forth John Wheeler's *Treatise of Commerce* (1601). Wheeler was secretary to the merchant adventurers, and his statements are not free from bias and inaccuracy, but his book is a good defence of their policy and aims. Wheeler's reply to Milles provoked another attack from the latter, in the *Customers Replie* (1604), in which he added to the force of his own arguments by reprinting the *Treatise on Exchange in Merchandise and Merchandising Exchange* mentioned above. We need not, however, follow him through his other works. His mantle fell on Gerard Malynes, who was more moderate in his views, and had more knowledge and experience than Milles. Meanwhile, the East India Company had obtained their charter, and in it a clause allowing them to export bullion. In consequence of this, the controversy on the foreign exchanges, the brunt of which had been borne by the merchant adventurers, was turned against the East India Company. Matters were also complicated by the introduction of a new element into the discussion, viz. the relative advantages of joint-stock and regulated companies for

carrying on distant trade, the East India Company being an example of the former, and the merchant adventurers of the latter. It must also be pointed out that the state of trade in the reign of James I. caused, reasonably or unreasonably, much anxiety; and the currency, the privileges of the trading companies, the price of wool, the navigation acts, etc., formed from time to time the subject of government inquiry. We shall deal with these issues later on; they are mentioned now to show how impossible it becomes with the growing complexity of economic questions to separate the writers of this period into well-defined groups. Early in the reign of James I. there was some possibility of the revival of the old machinery for the regulation of the foreign exchanges. The controversy burst into new life in 1622. To meet the charges brought against the East India Company, Thomas MUN published, in 1621, his *Discourse of Trade from England to the East Indies*, which was devoted partly to showing the advantages of the exportation of bullion. It is interesting to notice, however, that as yet Mun had not entirely broken away from the old school, for in this work he approved of the statutes of employment. Edward MISSELDEN, for some time deputy governor of the merchant adventurers at Delft, had long devoted attention to the woollen trade, and in 1622 he published his *Free Trade, or the means to make Trade flourish*. In this work he discusses the reasons for the backwardness of the English cloth trade, and defends the company organisation. But for some cause he appears to have been not unwilling to disarm the opposition to the merchant adventurers and to turn it against the East India Company; and amongst the causes of the decay of trade he enumerates the exportation of bullion by the latter.

Now Malynes had already, in his earlier pamphlets, found a sufficient cause not only for depression of trade, but for all social evils, in the theory of the foreign exchanges which we have already noticed. To his mind the only remedy likely to prove efficacious was the revival of the staple system. Naturally, therefore, he thought Misselden completely mistaken in the causes to which he attributed the supposed decay of trade, and he approved of a joint-stock company for the East India trade. He therefore replied to Misselden in his *Maintenance of Free Trade* (1622), in which he reiterated his theory of the foreign exchanges. This pamphlet was almost immediately followed by his great folio *Lex Mercatoria*, in which he expressed the same views.

We may digress for a moment to point out that we probably owe to Malynes the introduction of the word "capital" into England. At the beginning of the 17th century this word was unknown, or at any rate not in use in England. In his *Lex Mercatoria*, Malynes endeavours to popularise the Italian and Dutch method of keeping accounts, and he describes the *capital* or *stock* of a merchant as consisting of the goods in his warehouse, his ready money, debts due to him, houses and lands in his possession, and his "plate, apparell, and household stuff." "Capital," as used by Malynes, was derived from *capitale*, very numerous instances of which may be given from continental treatises on mercantile law.

To return to the controversy of 1622, Malynes's work was not allowed to pass unquestioned. In 1623, Misselden replied in his *Circle of Commerce, or the Ballance of Trade*, in which he completely refuted Malynes's theory of the foreign exchanges, and, taking up the defence of the East India Company, pointed out the advantages of the exportation of bullion, and sketched the theory of the balance of trade. Malynes again replied, but his theory had been completely demolished. Thus the mercantilists not only arrived at a truer doctrine of international trade, but in doing so destroyed a theory with which the old views with regard to usury were closely bound up. In 1628 Thomas Mun further developed the argument for the exportation of bullion in the *Petition and Remonstrance of the East India Company*, which was republished in 1641. Meanwhile, Sir Ralph MADDISON had been devoting attention to the subject. He had sat, with Mun and others, on the royal commission of 1622, though for some reason his name was omitted on the reappointment of the commission in 1625. Under the commonwealth and the protectorate he was regarded as a great authority on currency questions. He gave a clear statement of the theory of the balance of trade in *England's looking in and out*, 1640, a work which was reprinted in 1641, and again, with a few verbal changes and additions, in 1655 under the title of *Great Britain's Remembrancer*. Maddison, however, holds a middle position between Malynes and Mun, for his views on currency and the foreign exchanges appear to be based upon the works of the former. Mun incorporated the arguments of the *Petition and Remonstrance* in *England's Treasure by Foreign Trade*, published in 1664, some years after his death, and this work became the chief bulwark of the mercantile system in England. It passed through many editions and exercised an influence almost incredible at the present time. Thus the great system of which we find the general outline in the *Briefe Conceit of English Policy* was furnished with an economic basis. But before we describe the principal characteristics of Mun's work, it is desirable to trace the development of the other lines of thought which his book brought to a focus.

The economic writers of the 16th and the 17th centuries agreed in maintaining that the unrestricted operation of the motive of self-

interest led to disorders in the state, and that an efficient system of industrial and trade organisation was necessary to direct the economic activities of the country into the right channels. They set before themselves a definite object, the "public good," by which they meant the creation of a "commonwealth," in which the various trading interests should be so balanced as to secure the greatest economic efficiency of the various elements consistent with the self-sufficiency of the nation as a whole; and considerable prominence is given to this idea as an "economic motive" in the works of the best writers. Thus Mun distinguishes between three sorts of gain, (i) that of the commonwealth, which was sometimes the merchant's loss; (ii) that of the merchant, "which he doth sometimes justly and worthily effect, although the commonwealth be a loser"; and (iii) that of the king, "whereof he is ever certain" (*England's Treasure*, etc., p. 64), but he had previously stated the rule that, in commerce, "private gain was ever to accompany the publique good" (*ib.* p. 3). The pursuit of the public good, interpreted in the sense given to it above, was a real force in the economic world, and the suppression of a trade "hurtful to the commonwealth" was generally approved. Taking the mercantile system at its best, it shows a distinct advance on mediæval ideas in the substitution of the wider interests of the nation for those of the craft or the municipality. On the other hand, it must be admitted that the majority of the writers show little or no consciousness of a high national aim. The "hurtful" trade generally happened to be that of a rival company, a dependency, or a neighbouring nation. The mercantilists differed too from the *laisser faire* school in the views they held on the relation of economic questions to religion, politics, and other subjects. Economic interests could not be isolated. Prosperity was the result of various economic, political, and religious forces mutually interdependent. Thus Sir William Temple remarks of Holland: "The trade of this country is discovered to be no effect of common contrivances, of natural dispositions or situation, or of trivial accidents, but of a great concurrence of circumstances," amongst which he enumerates the immigration of aliens, the constitution and credit of the government, liberty of conscience, security of life and property, and the interest of the people in their government, as well as causes of a more strictly economic character (*Observations upon the United Provinces*, Collected Works, 1723, i. 65). One of the mercantilist tests of economic prosperity separates them so sharply from more modern schools, that it deserves to rank as a fundamental principle of their teaching. This was the quantity of the precious metals which the country contained. A thorough examination of mercantile doctrines in relation to the circumstances of the time does not exonerate the writers from the charge of confusion of thought on this subject. There is no evidence that this led to any evils in the ordinary economic life of the community. But on foreign trade as a whole, and on the popular estimation in which different branches of foreign trade were held, it had enormous influence: "The ordinary means to increase our wealth and treasure," says Mun, "is by Forraign Trade, wherein we must ever observe this rule: to sell more to strangers yearly than we consume of theirs in value." The economic pamphlets of the period abound with similar statements. They certainly mean that the benefit of foreign trade is measured by the excess in value of exports over imports, and that branches of commerce which can not bear this test should be discouraged, or even suppressed altogether. Although there is no "historical justification" for this doctrine, we can see how it arose. We may dismiss the idea that the mercantilists thought "wealth" and "money" identical. No man could believe more firmly than Gerard Malynes in the necessity of securing a constant influx of bullion, yet we owe to him the first clear definition of capital in the English language. His book, bound up with Dafforne's *Merchants' Mirrour*, one of the most complete works on book-keeping then in existence, was very generally used as the chief authority on mercantile affairs. The strongest advocates of the theory of the balance of trade were successful business men. Mun was one of the ablest East India merchants of his time. There is no trace of any confusion of wealth with money in their business transactions, and they exported bullion like any other commodity. We must therefore seek some other explanation of the fallacy. Although the old bullionist theory of the foreign exchanges had been refuted, the writers of the 17th century could not free themselves from the conceptions on which it was based, and such works as Roberts's *Mappe of Commerce* (1638), or even Alexander Justice's *General Treatise of Monies and Exchanges* (1707), in which the ratios and methods of exchange between London and other trading centres are given in great detail, show that international transactions were still carried on in much the same manner as under the staple system. The king's Exchanger (*q.v.*) had disappeared, but the cambists and goldsmiths performed his functions with great profit to themselves. Communication between one country and another was slow and difficult; credit agencies were little developed; and in such circumstances the old view of the precious metals was not easily eradicated. It remained firmly fixed in the popular mind. It was more natural to regard the changes which lapse of time, expanding commerce, and the rise in prices had brought about, as modifications of an old theory, than to invent a new

and more accurate one. The strict analogy drawn by the writers of this period between the business transactions of an individual and the foreign commerce of the nation as a whole gave to the old theory a greater persistence. The fact that during the 17th century imports and exports were a fairly good test of international indebtedness had the same influence. It may also be pointed out that English imports consisted of a greater proportion of luxuries, such as spices, wines, silks, and fine linen, and a smaller proportion of necessaries and raw materials than at the present day, while bullion was indispensable for trade with the east, in the then backward state of English manufactures. So the mercantilists tried to keep down the importation of commodities which in their opinion sapped the vitality of the nation, and to secure the bullion which they required (see MERCANTILE SYSTEM).

We are now in a position to understand the attitude of the school of which Mun was the typical representative to the economic questions of the 16th and the 17th centuries. It is obvious that the mercantilists were not likely to take much theoretical interest in the finely-drawn distinctions of the canonist writers on the subject of usury. Theological influences were not strong in this country; and true to the English tradition, the mercantilists preferred expediency to metaphysics. It is probable that the views of the later canonists were never thoroughly popularised in England. During the reformation period there was much controversy, and towards the end of the 16th century many pamphlets were written, amongst which we may mention Nicholas SANDERS's *Briefe Treatise of Usury* (1568), Thomas WILSON's *Discourse of Usurie* (1569), Rogers's translations of the works of M. P. Cæsar and N. Hemming (1578), H. SMITH's *Examination of Usury* (1592), and Miles MOSSE's *Arraignment and Conviction of Usury* (1595). But the development of trade and commerce, which at an earlier period might have imparted great vitality to such discussions, took place subsequent to the reformation, and though the influence of the contending schools may be traced in the legislation of the period, English writers appear to have regarded the subject mainly as one of practical expediency. Malynes was indebted to Wilson's *Discourse* for some of his arguments and illustrations, but even those who were willing to prejudice the merchant adventurers by attributing their "usurious" practices to the influence of Rome, were on the whole hostile to the prohibition of usury. The doctrine was important only as a support to an erroneous theory of the foreign exchanges, and, with the refutation of the latter, interest in the former disappeared. The CULPEPERS, father and son, Thomas Manley, and other writers from time to time engaged in the controversy. The average English position is stated in Sir J. CHILD's *Brief observations concerning Trade and the interest of Money* (1668). In *The Interest of Money mistaken, or a treatise proving that the Abatement of Interest is the Effect and not the Cause of the Riches of a Nation*, published in the same year, an attempt is made to correct a current popular fallacy. Mun's view was the ordinary view of the time; favourable to usury, he held that "this course in the rich giveth opportunity presently to the younger and poorer merchants to rise in the world, and to enlarge their dealings; to the performance whereof, if they want means of their own, they may and do take it up at interest: so that our money lies not dead; it is still traded" . . . "usury and trade rise and fall together" (*England's Treasure*, etc. 144, 146). With the views of LOCKE and the other writers of the end of the 17th century we shall deal in a later section.

While the theoretical discussion of interest and usury attracted few writers, the constitution of the trading companies assumed great importance in economic controversy. This was inevitable, for at the beginning of the reign of James I. the whole of the foreign trade of the country except that carried on with France was monopolised by one or another of the companies, and they were one of the most important factors in economic development from the beginning of the 16th to the middle of the 18th century. During the period which we are now considering, viz. from the beginning of the 16th century until the publication of Mun's work (1664), there were, roughly speaking, two stages in the controversy on this subject. In the first stage the Merchant Adventurers Company was the most powerful of the associations then in existence. The controversy naturally took the form of a struggle between the merchant adventurers and those who looked for a solution of the great problem of the organisation of foreign commerce to a revival in some form of the staple system. The first stage may be said to terminate with the free-trade bills of 1604, to which reference has already been made. After the failure of these bills the position of the companies was assured, although hostility to them in one form or another is a most marked feature of 17th century history, and Cromwell tried the experiment of a free and open trade with the East Indies in 1653. The case for the merchant adventurers is stated with great moderation in an anonymous treatise, *Towchinge the Multitude of Marchantes for ventinge of Eng. clothes* (*Rawl. MSS.*, D. 23). After pointing out that the government should provide for only so many merchants "as have acquaintance, and as have polycy and understandinge to trade together to buy up all clothes vendyble for marchant venturers, and to carry them together, by one consorte of Marchants, unto one certen marte," the writer goes on to say·

"I do also suppose yt it is not profytable for the realme to have a multytude of Marchante Venterers, yt have but small stockes, and thereby they have but small credytt, and suche marchantes can not convenyently tary for theyre sales, nor yet keepe necessarye order." The opponents of the companies, as we have seen, claimed free trade as their natural right and inheritance, but "this generall lybertye . . . would cause a greate confusion, and a greate dysorder to growe in the ventyng of Englyshe clothes, whereby would follow yt or Englyshe clothes would be soulde at a lower pryce, then is fytte for the benefytte of or realme, and strange wares for England would be boughte at a dearer pryce than is convenyent for our commonweale of Englande." On the other side the arguments, in addition to the one mentioned above, were very strong. It was urged that freedom of trade would lead to the increase of wealth and shipping, the more equal distribution of wealth, and the increase of revenue. It was further maintained that the company organisation was no longer necessary, and that if trade were free, commerce might be extended beyond its present limits.

The growth of the East India Company, which was incorporated on the last day of the 16th century, led to the second stage of the controversy. The merchant adventurers were what was called a regulated company; the East India Company was organised on the joint-stock principle (*vide* Companies). Now many people who objected to monopoly in every form were of opinion that the former was less injurious to trade than the latter, and the East India Company had a long and arduous struggle before it won the victory. The conflict had to be waged with the Turkey Company, whose trade in raw silk was ruined by the enterprise of the East India merchants, with those who were alarmed at the exportation of bullion, with the free traders and interlopers, and with those who thought the East India trade disastrous to the growth of the navy. The last-mentioned cause of hostility gave rise to a sharp controversy between Sir Dudley Digges and an anonymous writer, J. R., in 1615. "The East India men," says the latter, "not able to furnish those places they resort to, keep out others from coming amongst them. . . . Besides, how tedious and costly they, and all other companies, make it to their own associates, whereas out of orders, and cause of upholding their trade, men can neither dispose of their own as they would nor have the benefit under a long time? How private do they and other companies make it when . . . how plentifully soever the commodities are brought in and at what advantage soever they buy them, they will be sure to keep up the price, either by sending most part of the commodities abroad, or else by buying all others into their hands?" Digges's reply, *The Defence of Trade*, on behalf of the company, probably derived more force from the position of the author than from the arguments he employed. The company of course could point to the fact that the prices of eastern produce had fallen since their incorporation, and they made as much as possible of this argument, which was further elaborated by Mun in his *Discourse of Trade to the East Indies* (2nd ed. 1623). The company and its advocates, however, appear to have evaded rather than answered the objections of their opponents. No one during the 17th century wanted freedom of trade in the modern sense of the words. It was universally recognised that some form of regulation was necessary, and most people would have chosen the company organisation. The object of the free-trade bills (1604) was not to break down all restraints on free competition, but to throw the companies open to all who cared to join them, imposing by government authority such charges as were necessary to keep up their official establishments in foreign ports. It was the monopoly of the companies which roused the hostility of the outsiders. The companies seem to have imagined that when they had shown the advantages of the trades they monopolised, and proved the necessity for regulation, they had answered their opponents. Mun wrote *England's Treasure* long before the end of the struggle. But his book did good service to the company. Their exportation of bullion could no longer be urged as a reasonable ground of objection, and the East India trade had been proved to be favourable to the growth of the navy.

It has become a commonplace to regard the navigation acts as the natural outcome of mercantile doctrine. The political circumstances of the time, the growth of foreign commerce, and along with it the necessity of providing adequate means for its defence, and the foundation of colonies, showed the great importance of a powerful navy. The economic writers of the period were naturally influenced by the general movement, and they urged the encouragement of trades, especially the fisheries, which were favourable to the growth of the navy. The vast increase in the wealth of the country, and the greater ease with which large sums can be raised by taxation, have made inapplicable to the present age the practical suggestions of the mercantilist writers. But the importance of a mercantile marine as a naval reserve is felt as keenly now, especially in times of danger, as in the period under discussion. The economic arguments, however, by which the navigation acts were defended, give to those measures a peculiar character. There were navigation acts in the reign of Richard II. Those, however, we need not discuss. It is the series of acts commencing in the reign of Elizabeth, and culminating in the great act of

the Long Parliament (1651), re-enacted at the restoration, to which we shall devote our attention (*vide* NAVIGATION ACTS). The Merchant Adventurers Company, which as we have seen played such an important part in the development of the mercantile system, early associated itself with this naval policy. Thus we find them advocating it in 1551. One of their *Articles and Allegations . . . against the Hanse Merchants* (*Rawl. MSS.* C. 394, ff. 37, 38) was to the effect that whereas they "have and by all waies do indevoure themself to supporte and maignteigne to their power, the whole Navie of this your Ma^tes realme, by fraightinge and ladinge of the same and to contynue a greate nomber of your Ma^tes subjects in maroners crafte: the said Esterlinges to the intollerable decay therof, both inwardes and also outwardes do contynuelly lade, fraight and shippe their goodes, wares and marchandises in foreyne and strange bottomes, and vessells." They then point out the loss to the country of the money paid for freight and insurance. This is an argument which recurs over and over again, and it is evident that the writers of the period attached great importance to it. Mun argues that we must "use our own shipping and so get the merchant's gains, insurance and freight," though generally speaking "commerce should be free to strangers to bring in and carry out at their pleasure" (*England's Treasure*, p. 22). The influence of the navigation acts was made the subject of government inquiry, and much attention was given to the subject throughout the 17th century. *The Advocate* (1651), which was published to allay the discontent caused amongst some classes by the act of 1651, and which we find reflected later on in the writings of Roger COKE, shows how these acts were regarded as part of a general scheme of economic policy. This work points out that it was the design of the Dutch "to engross universal trade that so they might poiz the affairs of any other state about them and make their own considerable." The advantages which Holland has over England are then enumerated. Their ships are built, provisioned, and convoyed at less cost than those of England. Their "cheapness of freight," which is an advantage of 20, 15, and 10 per cent over England, has forced English merchants to hire and freight Dutch ships. They employ a "great stock"; give "prudent care to their manufactures"; make the negotiation of commercial treaties their "interest of state"; impose small customs; encourage inventions; have a low rate of interest; facilitate their trade by a bank; and pursue an enlightened land policy. Some "unalterable laws in manufactures" are enunciated. (1) There is no manufacture or artificial commodity which cannot be transplanted into any country. (2) All manufactures, if they are of a certain goodness, are of a certain value and price also. (3) Two persons selling or making commodities of a like goodness, he shall have the preference of the market that will sell them the cheapest. And so in international trade. (4) The cheapness of manufactures and artificial commodities depends upon the plenty and cheapness of the raw material, and upon the price of labour. The price of labour depends upon the price of victuals, house-rent, and other things necessary. The Dutch have no extraordinary advantages over England. Such as they are, they are due to the carelessness of England. By trade alone can wealth and shipping be increased, and so the power of any nation sustained. A commonwealth can only be enriched by reducing into general practice the courses used by private men for that purpose. Hence England should encourage native manufactures; and weaken Dutch shipping. Commodities must be imported from the immediate places of their production or growth, or as near as conveniently may be. Exports, native or other commodities, must be sent to the farthest market, where they will yield the greatest price and have the quickest sale. After these reasons, it is hoped that little or no dissatisfaction with the navigation acts will remain.

The examples we have given show the manner in which the mercantilists approached the questions of their time, and it is unnecessary to trace in detail the economic policy which found expression in the corn laws and bounties, in the commercial treaties, and the foundation of colonies. We have said "policy," for the mercantile system was a collection of practical expedients, based indeed on the fundamental principles we have noticed, but never elaborated into a scientific economic system. Such was the state of economic thought when Mun's book was published, and we can now understand the popularity with which it was received. As a scientific work it has no merit whatever. But it appealed to a very strong and growing sentiment, and put into words what most people believed at the time of its publication. Mun's work, with its sequel the *British Merchant*, the name given to the series of papers written in opposition to DE FOE'S *Mercator*, during the controversy on the free-trade clauses of the Treaty of Utrecht (1713), gives the best idea of mercantilism as an economic system. But before the time of its greatest influence forces had been set in operation which ultimately overthrew it, and we must now briefly sketch this movement.

We have already seen the character of the early opposition to the trading companies, and the appeals to natural right as the basis of free trade. The companies won the victory, for in the relation of the government to trade, and the unsettled state of the countries to which the companies traded, their organisation was neces-

sary, and they included amongst their numbers the wealthiest and most influential of the merchants. The outsiders on the other hand were weak and disunited. But with the extension of commerce the number and influence of the latter grew; and it became clear that the exclusive privileges of the companies were an anomaly. The great statute of monopolies (1625) was a step towards freedom of trade; for although many of the evils complained of remained unchecked, it established the principle that none should monopolise for private gain what was the equal right of all English citizens; and it restricted the royal prerogative in the regulation of trade. The agitation against the trading companies was not without important results, for the most powerful of them, the East India Company, was reorganised on a broad national basis (1692-1702). In the 18th century we find little discussion of a subject which had been of such importance in the century before, and Tucker's pamphlet on the Turkey Company (*Reflections on the expediency of opening the trade to Turkey*, 1753) only expressed what was true of all the companies then in existence. It is doubtful whether at this time they were a serious restriction on trade, but they had performed the useful functions they once had, and it was absurd to continue their privileges. In other directions also, *e.g.* in Walpole's colonial policy, and the decay of the Elizabethan system for the regulation of wages and industry, we can see a movement towards free trade.

Meanwhile the theory of natural right was shattering the philosophical basis on which the mercantile system rested. The instances we have given from the history of the trading companies may probably be referred to popular sentiment, or to conceptions derived from English common law. At any rate, the latter was appealed to in the Commons debates of 1601 (Townshend's *Historical Memorials;* D'Ewes's *Journals.*) But the theory grew in influence and the range of subjects to which it was applied; and the levellers claimed universal suffrage and other measures as the natural right of all men (*Clarke Papers*, edited by C. H. Firth for the Camden Society, Introduction). Economic and popular sentiment coalesced with the philosophical movement, and with the development of the theory of the social contract the way was paved for an individualist system of political economy. Philosophical conceptions, however, derived from this source, had little or no influence on economic theory until the time of Hume. Hobbes and Locke took the economic ideas of their age as they found them ready made by the pamphleteers of the 17th century, and merely stated them with greater clearness. During the period with which we have to deal, the economic is of greater importance than the philosophical movement. The attempt to deal with the practical difficulties of the 17th and the 18th centuries supplied those fundamental economic conceptions without which the science could have made no progress.

We have seen that one of the chief sources of error in the works of the mercantilist writers was their confusion of thought on the nature and functions of money. The foundation of the Bank of England (1694) and the recoinage (1696) called forth an immense number of pamphlets dealing directly or indirectly with this subject. It is from this period that we can date the theoretical discussion of economic questions, and the attempt to work out a scientific system. English writers had discussed continental banks many years before the foundation of the Bank of England. We may mention, for example, the *Treatise on Exchange* (1564), to which reference has already been made. In works intended for the guidance of merchants, such as Malynes's *Lex Mercatoria* (1622) and Lewis Roberts' *Merchants Mappe of Commerce* (1638), it was natural that the writers should explain so important a feature of continental practice. The superiority of the Dutch was, as we have seen, partly attributed to their banking system, and during the 17th century the advisability of adopting it in England was frequently urged upon the government (*e.g.* Hugh Morrell to William Lenthall, ii. Jan. 1646-47, *Portland MSS.*, vol. i. p. 405). Generally the establishment of a bank was advocated in pamphlets in which its advantages were discussed. Amongst these we may mention Thomas Violet's *Advancement of Merchandise*, 1651; Sir Ralph Maddison's *Great Britain's Remembrancer*, 1655; Samuel Lambe's *Seasonable Observations*, 1657; W. Potter's *Tradesman's Jewel*, 1659; Francis Cradocke's *Wealth Discovered*, 1661; Sir Edward Ford's *Experimental Proposals*, etc. 1666, etc., which show that for some years before the great experiment people's minds were much occupied with the subject. As these proposals took a more definite shape the number of books published became larger. The banking question was associated with the coinage, the public debt, and general questions of trade and commerce. Sir Dudley North, Sir William Petty, John Locke, Nicholas Barbon, Michael Godfrey, William Lowndes, William Paterson, Robert Murray, John Asgill, Simon Clement, are some among the many names which may be found in English controversy during these years. One pamphlet followed another with such rapidity, and discussion was so general, that it is difficult to single out any one author as the representative of the others. North's *Discourses* (1691), however, should be noticed, and the works of N. Barbon show a deeper insight into economics than those of his contemporaries. Locke's *Considerations of the Lowering of Interest and Raising the Value of Money* (1691), followed by his *Further Con*

siderations (1695), not only refuted the arguments advanced by William Lowndes and others, in favour of his scheme for restoring the coinage, and so saved the country from a great disaster, but contributed much that was of permanent value in economic science. In spite of these merits, however, Locke was strongly under the influence of the mercantile doctrine. The great controversy of 1691 to 1696 finally disposed of the theory of money which underlaid the mercantile system, and the relaxation of its influence was now only a question of time. The persistence of an old theory, long after its refutation, is a common phenomenon in the history of human thought. While the discussion of currency, banking, and credit undermined the theoretical framework of the mercantile system, and the growth of statistics threw doubt upon the balance of trade as a test of economic prosperity, the accumulation of capital and the development of commerce were removing the conditions of which the mercantile system was partly the reflex. During the first fifty years of the 18th century economic progress was slow. Defoe indeed in his *Mercator* had urged a principle which would have led to important results if it had been acted upon. He recommended no less than the *isolation* of economic questions. "Gain is the desire of merchandise: trade is a commutation of merchantable commodities between one country and another, and for the mutual profit of the traders. The language of nations one to another is, *I let thee gain by me, that I may gain by thee* . . . Trading is a matter entirely independent in its nature, and neither consults other interests, nor depends on any interests, but what relate to itself" (*Mercator*, No. 21). But it was the *British Merchant* and not *Mercator* that was sent to every parliamentary borough for the use of the inhabitants.

Why is it, we may ask, that for so great a length of time little progress in economic science has to be recorded? Certainly it was not due to lack of interest in economic subjects. There seems to have been no difficulty in obtaining a hearing. There are literally hundreds of economic writers in England between 1500 and 1752, and every trade crisis or controversy produced its score or so of pamphlets. The reasons for the slow growth of the science seem to have been as follows:—(1) With few exceptions the economic works of this period were written merely to advocate some definite object,—to urge the adoption of some scheme for the improvement of trade, to defend those whose interests were threatened by new developments, *e.g.* the numerous pamphlets on the East India Company, and their relations with the Levant Company, or to protest against some abuse and to suggest a remedy, *e.g.* the pamphlets on the poor laws, the coinage, public credit, etc. This close relation between economic literature and the practical life of the nation was unfavourable to the development of a system of economic doctrine. Mun (*England's Treasure by Foreign Trade*, 1664) expressly states that his work was not intended as an exhaustive and systematic treatise on the economics of the 17th century. He proposed to discuss only "so much of the merchant's practice as concerned the bringing of treasure into the kingdom." (2) Such being the objects of the writers, there is a strong bias in most of them in favour of the organisation or project with which they happened to be identified. The biographies of the earlier writers are therefore of importance, for their personal relations with hostile organisations or individuals, and events in their lives, affected their views to a great extent. (3) When once a controversy was concluded, no one endeavoured to develop and apply the general principles which may have been stated in the course of it. Thus the currency controversy in 1694, and the defence of the East India Company, led to a statement of the main outlines of the principle of the division of labour (SIMON CLEMENT; *Discourse of General Notions*, etc., 1695; *Considerations on the East India Company*, etc.). Other writers such as Petty, Berkeley, Addison, etc., also enunciate this principle. But it lay unregarded until Adam Smith made it one of the fundamental principles of the *Wealth of Nations*. (4) The early writers had to depend, for the most part, on their own knowledge and experience to suggest or illustrate their arguments; trustworthy information on economic subjects was neither so copious nor so widely diffused as it is at the present time. Sir William Petty, John GRAUNT, Gregory KING, and Charles DAVENANT, who laid the foundations of statistical science, all lived in the latter half of the 17th century. So late as 1699 Davenant complains (*Essays on Trade*), that "the aids and lights which might be gathered from the public accompts and offices have been industriously withheld from all who are not servile applauders of the wild and destructive conduct . . . of some persons of no small power in the management of affairs." He and Gregory King are "beginners of an art not yet polished, and which time may bring to more perfection." (5) The early writers employed in their works the language of ordinary business. They had no scientific terminology. Now the language of the market-place is not characterised by scientific precision, and their looseness of phrase gave rise to endless misunderstanding.

The point of view from which early economic literature should be regarded becomes therefore quite clear. It must be studied along with the history of the times at which it was written. This must be carefully borne in mind, or we shall form an erroneous estimate of the value of these early works and the ability of the writers.

We must not expect a uniformity, consistency, and completeness of doctrine and practice which are not to be found. Nothing could be more fatal to the right appreciation of this period than to investigate it with the idea that we shall find in it only illustrations of a well-rounded set of general propositions.

[Much has been written on the history of economics. *Vide* especially Ashley, *Economic History*, vol. i. pts. i. and ii.—Cunningham, *English Industry and Commerce*.—Endemann, *Die Nationalökonomischen Grundsätze der Canonistischen Lehre*.—Hewins, *English Trade and Finance*.—Heyking, *Handelsbilanztheorie*.—Knies, *Politische Œkonomie*.—Roscher, *Geschichte der Nationalökonomik in Deutschland*.—*Political Economy* (trans. Lalor), *Geschichte der englischen Volkswirtschaftslehre*.—Schanz, *Englische Handelspolitik*.] W. A. S. H.

ENGLISH SCHOOL OF POLITICAL ECONOMY.

Before Adam Smith, p. 730; Modern Economics, p. 733.

Before Adam Smith.—The English writers on political economy before Adam Smith do not at any time present the marks of a "school," properly so called. The nearest approach to a "school," so far as community of doctrine is concerned, is found among the mercantilists; but even these writers owe no allegiance to any personal authority. Their views are individual and independent; and it is only with Adam Smith that the English school *par excellence* begins. The rise of that school was affected by many influences, English and foreign. Of these the genesis of economic theory in England must be sought chiefly through the writings of the authors whose names are mentioned in the rapidly-connected sketch which follows.

There is much that is of interest not only to the economic historian but also to the student of economic theory in the early statutes and the records of the social history of England, but few English writers earlier than the 17th century call for special mention in this article. Langland, in his *Visions of Piers the Plowman* (14th century), and the writer of the *Libell of Englishe Policye* (15th century) incidentally supply some interesting illustrations of the course of life in England during those periods. The writings of Walter of Henley (13th century), Fitzherbert (16th century), and Tusser's *Five hundreth pointes of good husbandrie* (Tottel's edition, 1573), throw light on the state of agriculture and the condition of the people. "W.S." (see Hales, John) in his *Discourse of the Common Weal of this Realm of England* (written 1549, printed 1581), acutely discusses the contemporary depression of agriculture and industry. His attempts to show that the "alteration of the coyne is the cheifest and principall cause of this universall dearthe" are highly interesting examples of early economic argument and analysis. More's *Utopia*, 1518, imbued as it is with the ideas of classical antiquity, has more affinity with the *Republic* of Plato than with the industrial utopias of later writers. The chief impetus to the publication of *Discourses upon Trade*, was afforded by the problems of policy in colonial trade by which the commercial activity of the English people, following upon the enterprise of navigators and adventurers, found itself confronted. This is noticeable as early as the essays of Bacon, 1597 ("Of Plantations"), and the writings of Raleigh. From the incorporation of the East India Company, 1600, there is a continuous succession of writers on the theory of foreign trade which formed the kernel of the old Mercantile System. The mercantile school may indeed be said to continue its existence in quite different forms from this time to the days of Steuart. The traffic in the precious metals naturally attracted the attention of statesmen and of merchants alike; and from the reign of Edward III. onward, attempts were made to regulate its exchange for imported commodities. The inevitable export of bullion for the East India trade found an ingenious apologist in Mun, who, in his *Discourse of Trade from England into the East Indies*, 1621, and *England's Treasure by Forraign Trade*, published 1664, shifted the ground of the Balance of Trade from the position which it holds in the writings of Armstrong (1530) and Malynes (1601). He argued that this export, like the seed cast away by the husbandman, was in the long run amply repaid in kind, and that the raw material which the precious metals purchased, when worked up and sold to foreign countries, caused the national stock of bullion to be increased and not diminished. "The title of Mun's book, *England's Treasure in Foreign Trade*, became a fundamental maxim in the political economy, not of England only, but of all other commercial countries" (*Wealth of Nations*, bk. iv. ch. i.). Malynes, *The Canker of England's Commonwealth*, 1601, and *Lex Mercatoria*, 1622, describes the Ancient Law Merchant as well as the contemporary habits and institutions of trade; and Lewes Roberts, *Merchants Mappe of Commerce*, 1638, *Treasure of Trafficke*, 1641, explains the operations of commerce, and recommends practical measures,—*e.g.* free export of gold and silver, and low customs,—for its promotion. His *Mappe of Commerce* is a mercantile geography, showing the situation, exchanges, and commodities of trade of different places. Misselden (*Free Trade*, 1622, *Circle of Commerce*, 1623) exhibits the Spaniards as warnings, the Dutch as models in mercantile policy, and disputes with Malynes the causes and consequences of an unfavourable balance of trade. The example of the low rate of interest in Holland further stimulated the Culpepers, father and son, to urge the reduction by parliament of the legal rate of interest—a demand supported with much weight by

CHILD (1668), whose business instincts, superior to his scientific theory, were probably not at fault when he supposed such a measure would redound to the encouragement of English commerce. The unsoundness of some of the arguments which he employs was pointed out in *The Interest of Money Mistaken*, 1668.

Passing by the utopia of HARRINGTON (*Oceana*, 1658), and such agricultural writings as those of Blith, *The English Improver Improved*, 1652, HARTLIB, *Legacy of Husbandry*, 1655, WORLIDGE, *Systema Agriculturae*, 1668, and John SMITH, *England's Improvement Revived*, 1670, we come to the speculations of HOBBES, 1670, and ASGILL, 1696, on the nature and causes of wealth. Particular recommendations for the improvement of trade by the naturalisation of aliens, and in favour of the policy of enclosures, are found in FORTREY, *England's Interest and Improvement*, 1663, and COKE, 1671. Fortrey's statement that the country "lost" £1,600,000 a year by its trade with France, long had a discouraging effect. The despondent tone of most writers of this time is echoed in the title of *Britannia Languens*, 1680, and in the arguments of its pseudonymous author (Philanglus), that the importation of foreign luxuries was a "consumptive trade" which threatened to bring about the decay of the nation while money was exported for them. The same writer urges the "legal regulation" of trade, to prevent its destruction by "private interest" and by the "cloggs" of navigation acts, companies, monopolies, etc. Similar views with regard to the eastern trade are found in POLLEXFEN'S *England and East India Inconsistent in their Manufactures*, 1697—a reply to DAVENANT'S *Essay on the East Indian Trade*, 1696-97. A more hopeful note is struck in *England's Great Happiness: wherein it is demonstrated that a great part of our Complaints are Causeless*, 1677, and in the optimistic preface of PETTY'S *Political Arithmetic*, 1682, which opposed to vain imaginings and timid surmises the positive conclusions of comparative statistics, and drily observed that the price of food was "so reasonable, as that men refuse to have it cheaper, by admitting of *Irish* cattle." The best thought of the time had now for many years been directed into the channels of trade, and produced, as was natural, an abundant crop of pamphlet literature on all questions connected with "the Science of the Great Commerce." Comparative study of other nations, especially of France, Holland, and Spain, was one main source of the inspiration of these writings, and numerous proposals sprung up for establishing banks (see ASGILL, BRISCOE, CARY, CHAMBERLAIN, CRADOCKE, LEWIS, MURRAY, PATERSON) and for emulating Holland in other matters. This spirit is shown in YARRANTON'S *England's Improvement by Sea and Land: To outdo the Dutch without fighting*, etc. (pt. i. 1677; pt. ii. 1681), in Sir Wm. TEMPLE'S *Observations on the Netherlands*, 1693, and in the popularity of the translations of "John de WITT'S" *True Interest and Political Maxims of Holland*, 1702, etc. (see DUTCH SCHOOL).

An important epoch is marked by GRAUNT'S *Natural and Political Observations upon the Bills of Mortality*, 1662, with which begins the science of DEMOGRAPHY, as statistics, and the theory of taxation may be said to commence with Graunt's more famous friend Sir Wm. Petty, whose remarkable treatises on *Taxes and Contributions*, 1662, *Political Arithmetic*, 1682, and the *Political Anatomy of Ireland*, 1691, exhibit an ingenuity of method and grasp of principle rarely if ever shown by his predecessors. The first table of mortality was published by HALLEY in 1693. DAVENANT (1699) and GREGORY KING (in 1696) continued the work of statistics (see ARITHMETIC, POLITICAL); while the current views on the balance of trade found an able opponent in BARBON (1690), who was soon to cross swords with LOCKE on the subject of money.

The proposals of LOWNDES, then secretary to the treasury (1695), to coin the new (silver) money lighter, provoked the opposition of Locke, whose able writings on money at this critical period of the great recoinage (see RECOINAGES) are still appealed to in controversies of to-day upon the history of the currency. The earlier work of VAUGHAN, *Discourse of Coin and Coinage*, 1675, should also be mentioned here. Mingled with the discussions of semi-political questions by earlier authors are many glimpses of a broader consistent theory, general principles of which now begin more clearly to emerge. The close of the 17th century is indeed a time conspicuous for the ability of English economic writers. Barbon's *Discourse of Trade*, 1690, contains some striking analyses of value, price, interest, and rent. NORTH'S *Discourse of Trade*, 1691, is an admirable exposition of the merits of free exchange. FLEETWOOD'S *Sermons against Clipping and Sweating of the Precious Metals*, 1694, precede by thirteen years his *Chronicon Preciosum* or history of prices, familiar to students of Adam Smith. The problem of the conditions of the poor which had fitfully occupied statesmen since the date of Richard II., in whose reign the earliest legislation for dealing with impotent beggars took place, seriously engaged the attention of FIRMIN (1678), HALE (1683), Child (who proposed the appointment of poor-law guardians or "fathers of the poor"), Cary (1695) and BELLERS, *Proposals for Raising a Colledge of Industry of all Useful Trades*, etc. 1695-1696. From DEFOE'S lively and prolific pen came, in 1704, the vigorous essay, *Giving Alms no Charity and Employing the Poor a Grievance to the Nation*, in which it was contended that workhouse labour should not be employed in competition with outside industry. The same writer's *Compleat English Tradesman*, 1725-27,

and *Plan of the English Commerce*, 1728, are the chief of his other numerous works on subjects relating to trade. John HOUGHTON, F.R.S., *Collection for the Improvement of Husbandry and Trade*, 1692-1703 (particulars of prices of corn, cattle, coal, hops, wool, etc.); *The British Merchant; or Commerce Preserved*, 1713 (papers collected and published by Charles KING, 1721); and Defoe's *Mercator, or Commerce Revived*, 1713, 1714 (an opposition paper to *The British Merchant*), afford useful details for the history of commerce.

LAW'S *Money and Trade considered*, 1705, exhibits at once the power and the defects of his erratic genius; original, daring, and acute, he admits no limit to the bounds of credit, and has little thought of its contraction. His book marks, however, a real advance in the study of money and credit. WOOD'S *Survey of Trade*, 1718, also deals with money and bullion. MADOX is an invaluable source of information for the economic historian in his *Antiquities of the Exchequer*, 1711, and *Firma Burgi*, 1726. In Ireland appeared about the same time the well-known *Drapier's Letters*, 1725, in which SWIFT inflamed the anger of his countrymen against Wood's copper halfpence; DOBBS' essay on "The Trade and Improvement of Ireland," 1729-31; and BERKELEY'S *Querist*, 1735, a collection of searching and suggestive inquiries in economics, revealing at once the author's mind and the degree of development which the science had then attained. Swift's *Modest Proposal for preventing the Children of Poor People from being a burden to their Parents or the Country*, 1730, is an elaborate joke framed in a tone of ironical and pseudo-economic savagery. GEE'S *Trade and Navigation of Great Britain considered*, 1729, is a despondent treatise of mercantilism, affecting to show "that the surest way for a nation to increase in riches is to prevent the importation of such foreign commodities as may be raised at home." VANDERLINT'S *Money Answers all Things*, 1734, on the other hand ably argues for free trade, while MANDEVILLE'S *Fable of the Bees, or Private Vices, Publick Benefits*, 1706, 1714, 1723, etc., urges the social advantages of individual liberty. Both books mark a movement in the direction of LAISSEZ-FAIRE. DECKER'S *Proposals*, 1743, for raising the whole revenue by a single tax on houses, and the *Essay on the Causes of the Decline of the Foreign Trade*, 1744, show much ingenuity in the study of taxation. John SMITH'S *Chronicon Rusticum Commerciale*, or *Memoirs on Wool*, 1747, is an industrious compilation of standard value upon this great branch in the history of English trade. Equally laborious but less praiseworthy are the *Dictionaries of Trade and Commerce* of POSTLETHWAYT (1751), ROLT (1761), and MORTIMER (1766). Postlethwayt's, the best of the three, was founded mainly upon the French dictionary of SAVARY. In 1751 and 1753 appeared translations from the Spanish of USTARITZ and ULLOA of the history of trade in Spain, and in 1753 a translation from the German of MAGENS' *Universal Merchant* (postscript 1756). The last two writers are mentioned by Adam Smith. FRANKLIN'S *Observations concerning the Increase of Mankind*, 1751; HUME'S essay of "The Populousness of Ancient Nations" in his *Political Essays*, 1752; and WALLACE'S *Dissertation on the Numbers of Mankind in Ancient and Modern Times*, 1753, show an interest in the progress of population, its causes and limits, nearly half a century before MALTHUS. The middle of the 18th century recalls the end of the 17th by the fertile ability of its economic writers. Hume's *Essays* contributed powerfully to the development of sounder views on money and the balance of trade. Wallace, in his *Characteristics*, 1758, discusses the functions of paper money and credit. The essays of Patrick Lord ELIBANK, on *The Public Debt* were published in the same year (1753) as FIELDING'S *Proposal for making an Effectual Provision for the Poor*. The most important writings appearing at this time were, however, those of CANTILLON, MASSIE, and TUCKER.

Cantillon's posthumous *Essai* (published 1755) is the earliest approach to a complete presentation of economic principles, tracing the distribution of wealth by the guiding thread of a central theory of value. Its influence was greatly felt in the FRENCH SCHOOL, but is also clearly seen in the *Essay on Money and Coins* of HARRIS (1755-58). Massie (see *infra*), though best known by his criticisms of Decker's and FAUQUIER'S proposals in taxation and by his *Essay on the Governing Causes of the Natural Rate of Interest* (1750), has been shown by Dr. Cunningham to have left a bibliography of economic literature of the highest value (*Economic Journal*, vol. i. No. 1). Tucker (see *infra*), dean of Gloucester, is remarkable for the breadth and liberality of view with which he regards the economic aspect of colonial and foreign politics. Tucker accepted with pride the sarcasm of Warburton, that he made a religion of trade as other ecclesiastics had been known to make a trade of religion. The dignity of economic study did not much longer need vindication. His *Reflections on the Expediency of a Law for the Naturalisation of Foreign Protestants*, 1751, were translated into French by Turgot (1755). His *Brief Essay on the Advantages and Disadvantages which respectively attend France and Great Britain with regard to Trade*, 1750, is said by BLANQUI to show the influence upon Tucker of the French economists with whom he was in close correspondence. But there can be little doubt that in their relations with Tucker at this time they were rather disciples than masters.

The high esteem in which the early English writings was held abroad was no doubt largely

due to the superiority of English commerce which gave them birth. It was felt with justice that a nation of successful merchants were worth listening to on matters of trade. The French in particular richly repaid their debt to us through Adam SMITH, upon whose mind they impressed their systematic and logical views; but it should not be forgotten that those views were largely founded on the practical judgments of English writers. Nor can the diligent student of the *Wealth of Nations* fail to be struck by the extent to which that work is rooted upon the earlier English writings. And though in the crucible of Adam Smith's mind the materials of his predecessors are often refined, they still do not defy recognition, but testify to the close continuity of the English school.

It has not been possible in this slight account to do more than enumerate some of the writers who preceded Adam Smith. For fuller notices the student is referred to the separate articles under the names of the authors. Contemporaries of Adam Smith are dealt with in a later portion of this article. It is only necessary to mention as appearing before 1776, the *Three Tracts on the Corn Trade and Corn Laws*, 1758, by Charles SMITH, whom Adam Smith has described as "ingenious and well-informed"; the important *Inquiry into the Principles of Political Economy* of STEUART, 1767 (see *infra*); ANDERSON'S *History of Commerce*, 1764; FERGUSON'S *History of Civil Society*, 1767; PRICE on *Reversionary Payments*, 1769, and on the *National Debt*, 1774; and Arthur YOUNG'S *Farmer's Letters*, 1771, *Rural Economy*, 1773, and *Political Arithmetic*, 1774, with some of his earlier *Tours* in the English counties. H. H.

MODERN ECONOMICS. PERIOD I. ADAM SMITH.—After the Union of 1707, Scotland began to play a part in English economic study. Francis HUTCHESON (professor of moral philosophy at Glasgow, died 1747) turned the attention of Scottish philosophers to economic questions, on which he himself touches, though briefly, in his published works (*e.g.* in his *Inquiry into the Original of our Ideas of Beauty and Virtue*, etc., 1st ed. 1725). The notion of the "greatest happiness of the greatest number" appears in Hutcheson, and he also lays stress on the connection between industry and self-interest, industry and property, thus carrying on the discussion raised by Mandeville (*Fable of the Bees*, etc., 1706, and later eds.), on the nature of the motives to economic action. The activity of the Scotch press (Foulis, Urie, etc.) in the publication and reprinting of economic treatises becomes noticeable about this time (say 1750 to 1770). Adam FERGUSON in the 4th ed. of his *History of Civil Society* (1773), announced the forthcoming work of Adam Smith, which was to be "a complete theory of national œconomy"; but Ferguson's own economical views (*e.g.* on division of labour) are given incidentally along with his political philosophy, and not in a separate treatise. In his *Institutes of Moral Philosophy* (1769), where he treats of economical questions, he borrows to some extent from Joseph HARRIS (*Essay on Money and Coins*, 1757). To much greater effect David HUME, who had learned from Hutcheson, had prepared the way for his friend Adam Smith by his keen criticism of the current views of the balance of trade, to say nothing of his pregnant remarks on the other subjects embraced by the "Mercantile Theory" (*Essays on Commerce, Money, Interest*, etc., 1752). Economical subjects receive separate consideration, and Hume's reasonings upon currency, credit, and population were of special influence. In the controversy as to the populousness of ancient nations he took the side of the moderns. In the matter of public credit, or national debts, he took the view that national debt would eventually prove the ruin of modern nations. He points out that the quantity of metallic money in a country does not determine the rate of interest, also that a time of increasing currency is a time of lively trade. He thinks that commercial jealousy rests on a false idea that one party must always be the loser, in a bargain. He goes, if not as far as Adam Smith, nearly as far as Josiah Tucker (*Advantages and Disadvantages which respectively attend France and Great Britain with regard to Trade*, 1750). But it was left to Sir James Steuart and Adam Smith to recognise for their own country what had already been made good by the physiocrats in France (see PHYSIOCRATS and FRENCH SCHOOL), that economical subjects must be a study by themselves. Sir James Steuart's book (*An Inquiry into the Principles of Political Economy, being an Essay on the Science of Domestic Policy in Free Nations*), written in exile in Germany, and first published (in Edinburgh) in 1767, made no impression on the public to be compared with that of Adam Smith's *Inquiry into the Nature and Causes of the Wealth of Nations* (1776); and was rather a revised edition of the mercantile theory than a new departure. The immediate popularity of Adam Smith's work, on the other hand, was largely due to its crushing criticisms (especially in bk. iv.) of the "commercial system," which was tracked out and destroyed in all its logical ramifications, however tenaciously it might afterwards survive in political practice. The idea of "natural liberty" organising industry, and transforming society "of its own accord," was stated by Adam Smith even more boldly than by the French economists, and he avoided their mistake of restricting productiveness to agriculture (bks. iv. ix.) In his chapters "On the Revenue of the Sovereign or Commonwealth" (bk. v.), he came out as "the greatest of theorists on finance" (Bastable); and no economical treatise ever exerted greater political influence,

On economic theory its influence has been also very great, though it was not so immediately visible, and is now partly spent. The definition of wealth, the discussions on labour, wages, rent, interest, and the short remarks on value, served as starting-points for more thorough and satisfactory consideration of these matters. Adam Smith's method of reasoning, though frequently deductive, involves so full an illustration from facts and statistics, where such were accessible, that he has often been claimed as an inductive economist. The industrial changes then taking place in England gave his treatise a peculiar historical importance, if they were not indeed responsible for its creation. Similarly, if we pass by Bentham's correction of one false concession in "the Wealth of Nations" (see BENTHAM), the next contribution to English political economy was largely occasioned by a change in the condition of the people.

PERIOD II. MALTHUS AND RICARDO.—The poor law of W. PITT, proposing a bounty on large families, and the popularity of Godwin's political theories, led MALTHUS to bring forward in his *Essay on Population*, 1798, a clear-cut theory of "the principle of population." He inquired into the nature and causes of poverty, as Adam Smith into those of wealth. The tendency of population to increase up to the limits of the means of subsistence was brought out more strongly than the checks on this tendency, which were not adequately stated till the book had emerged from the floods of criticism into a second edition (1803). The views of Malthus on general economic theory were not elaborated with such perfect lucidity as his doctrine of population; he tended either to fall back on physiocratic views, or to theorise, as on the measure of value and the corn laws, with a subtlety inconsistent with clearness. He maintained views on overproduction which brought on him the damaging criticisms of J. B. SAY. On the other hand, he shares with JAMES ANDERSON, and Sir E. WEST, the credit of first stating what is usually called the Ricardian theory of agricultural rent, that rent is the effect not the cause of price, and that it depends on the graduated fertility of lands. RICARDO, who first obtained fame by his *Letters on the High Price of Gold Bullion* (1809), and made an enduring mark on the theory of currency, owes his prominence in economic literature to his *Principles of Political Economy and Taxation* (1817). In this book he pushed the theory of rent farther than its discoverers, and made it, together with a new theory of value, the centre of a theory of the distribution of wealth between the three parties concerned in its production—the labourers, the employers, and the landlords. The value of manufactured articles is determined mainly by the quantity of labour necessary to the production of them, and of agricultural products by the quantity of labour necessary to the cultivation of the worst land actually cultivated. The height of this "margin," to use the phrase of Dr. CHALMERS, determines the amount of profits to the employers, and the amount of rent to the owners of all land above the worst. Ricardo's qualifications of this theory were neither numerous enough nor clearly enough stated; and, even if the theory had not been reproduced, as by M'CULLOCH, without the qualifications, a reaction against Ricardian political economy could be only a matter of time. But it held the field for nearly a generation after the publication of the *Principles*. It found popularisers both humble and eminent (Mrs. MARCET and DE QUINCEY): James MILL followed it wholly, and SENIOR with reservations that seemed in those days unimportant, though in after times the acuteness of Senior has been better recognised. TORRENS did not succeed in establishing his claims to independent authority, nor did Chalmers restore the authority of Malthus. WHATELY, LONGFIELD, LAWSON wrote clearly but without making any decidedly new departure. Professor Richard JONES, in appealing against Ricardo to the history of India, was before his time. The minor writers (see below) left fruitful hints, but made few converts among students of the subject. Robert OWEN and his followers gained little hearing in the world of letters. The victory of FREE TRADE (1846), the passing of the early FACTORY ACTS, the rise of CHARTISM, and the regulation of the paper currency (see BANKING), affected the course of economic discussions; and the French Revolution of 1848 played a part in England as well as on the Continent French and German writers began to acquire greater influence than ever before.

PERIOD III. JOHN STUART MILL.—Their influence was shown in John Stuart Mill's *Political Economy* (1848). This book was an attempt to combine abstract economical theory with the modifications necessary for its application in the concrete, and to view the whole of economics in relation to other parts of the philosophy of society. As Mill went beyond Bentham in his ethics, he went beyond Ricardo in his economics. Long before this time Mill had, like SENIOR, given attention to the question of method, which was afterwards to become an object of lively discussion.

The study of COMTE and other foreign writers had led Mill to doubt whether abstract theory was allowable at all in social inquiry. He retained it, however, for political economy; and in his chief economic book the abstract theory is presented, along with the modifications, being little more than a careful re-statement of Ricardian principles. He had wished to do for his own day what Adam Smith had done for his (see preface to Mill's *Political Economy*); and the influence of his book was so great that it seemed as if a new departure had

been taken and a new era begun. But Mill was so far from overthrowing the old doctrines that he really strengthened their hold at a time when it had been loosened. Yet, by his emphasis on the relativity of abstract economics to particular societies, and on the possibility of far-reaching changes in the social system, he showed an affinity with "historical economists," and "scientific socialists." The former found their earliest representatives in Cliffe LESLIE and Thorold ROGERS; and their views are now energetically advocated by INGRAM, CUNNINGHAM, and Ashley. The CHRISTIAN SOCIALISM (of MAURICE, KINGSLEY, LUDLOW, NEALE, Hughes) grew out of Owen and Chartism; and its upholders, in advocating co-operative production, appealed rather to philanthropy and human brotherhood than to cool economic theory. The scientific socialism of MARX, avowedly based on the Ricardian theory of value, can hardly be said to have representatives in this country among professed economists. In his views of Land Reform, Mill (like his father), approached very near to socialism; but his attitude to socialism as a general policy is quite as truly critical as sympathetic.

PERIOD IV. W. S. JEVONS.—This cool reception of scientific socialism is mainly due to the rejection, by Jevons and his closest followers, or the serious modification, by Marshall and Sidgwick, of the Ricardian theory of value. The ideas of Jevons have had greater power since his death than during his life. He was too impatient at the almost universal submission to Mill's authority to do Mill complete justice. But he was one of the first critics of Mill who attracted general attention at all; and, since his time, there has been less submission to authority of any kind. There has no doubt been a line of writers who follow the older school very straitly (FAWCETT, CAIRNES, MALLET) as among statesmen there has been a line of supporters of the old economic policy identified with BRIGHT and COBDEN. But changed conditions have forced most leading statesmen to go beyond *laissez-faire;* and new aspects of old problems have led theoretical economists into deeper study of particular questions (*e.g.* CONSUMPTION) than before. The mathematical treatment of economical data has practically fallen into the hands of a wing of the school of final utility, which is often spoken of as a school by itself, the mathematical school (Edgeworth, Wicksteed). Amongst the many writers who have taken part in discussions on currency and banking, Mr. H. D. Macleod has fallen back on WHATELY's view that economics is simply catallactics, Bonamy PRICE has professed to represent unaided common sense, BAGEHOT has insisted on the need of formulating deductive economics for "advanced" nations, and on the impossibility of doing so for uncivilised peoples. Bagehot's lucid writings on banking and depreciation helped to keep these questions before the minds of economists; and the fall of silver since 1870 has made bimetallism versus monometallism an object of lively debate. The dominant view among professed economists after Jevons seems to be that bimetallism under certain conditions is possible, but that the conditions are difficult of fulfilment. The question has been discussed in close connection with the subject of the metallic reserves of our English banks, and, in this as well as other connections, the wisdom of the Bank Charter Act of 1844 is not now upheld by the majority of economists. A large part of the recent work of economists in England has been the restatement of the older doctrines, with the fresh light afforded by the theory of value laid down in 1871 by Jevons in this country, and substantially one with the theory of the AUSTRIAN SCHOOL OF ECONOMISTS. In connection with this, there has been practically a new theory of wages and profits, towards which not only Jevons but Walker has contributed very essentially. The idea of a wages fund, as held by Ricardo's immediate successors, and till 1869 by J. S. Mill, has been abandoned as Longe and W. T. THORNTON had foretold. The distinction of interest from profits—capitalist from employer, has been better kept in view —largely owing to the writings of Walker The application to wages, interest, profits, and even taxation, of the idea of final utility has been pursued vigorously. Probably at no time have questions of economic theory ever been more ardently discussed in England than at present; and these discussions have hope of greater fruitfulness than before, because conducted now (*a*) with a much more adequate knowledge of what is written and said, about the subjects concerned, on the Continent of Europe, and in the United States of America, and (*b*) with a closer regard to the facts of everyday life, as the touchstone of all theories. Economists are more conscious than at any previous time of the importance of statistics for the understanding of the phenomena of society. They are also more keenly aware, partly from the influence of CARLYLE and RUSKIN, of their need of contact and sympathy with men and associations of men in the surrounding world, though they keep in mind the distinction of an economic theory from a mere record of facts or a mere utterance of philanthropic aspiration.

Even in this short sketch it would be wrong to omit mention of the minor writers and amateur economists. Every great industrial or financial change, besides awaking a corresponding movement of speculation among professed economists, has been reflected in the fugitive literature of the day; and there has often been a subordinate movement of social, political, and economic theory, apparently quite aside from the path of the classical economists. The

writings of the agriculturist, Arthur YOUNG, and the financier and politician, Richard PRICE, had a certain influence on economical study. In the dark days of the French War the writings of William GODWIN may be said to have given the first impulse to the socialistic speculations afterwards carried out by Charles HALL, Robert OWEN, EDMONDS, GRAY, J. F. BRAY, and William THOMPSON. With Thomas SPENCE begins the movement for the nationalising of the land, countenanced in theory at least by James Mill, and advocated in later times by DOVE, George, and A. R. Wallace. The books of PAINE include not only deistic and political utterances, but useful admonitions in regard to paper currency in the early days of the suspension of cash payments. Ld. LIVERPOOL'S *Coins of the Realm* (1805), with the mass of pamphlets (see *e.g.* H. THORNTON, Lord KING, Boyd, BARING, BOSANQUET, HUSKISSON, TROTTER) called forth by suspension and by the Bullion report, form a considerable literature, in the face of which (and often by the aid of it) the theories of economists like Ricardo shaped themselves. Such books as Thomas TOOKE'S *History of Prices*, ably continued by NEWMARCH, and in a less degree COLQUHOUN'S book on the *Resources of the British Empire*, and (later) PORTER'S on the *Progress of the Nation*, helped to point economists to the more ample use of statistics; and this service is now rendered by writers like Guy, Rawson, PALGRAVE, BOOTH, GIFFEN, and others in the journal of the "Royal Statistical Society" (founded 1834).

The "refutations" of Malthus on population proceeded from all sorts and conditions of men. Many men of the stamp of COBBETT and Perronet THOMPSON took up every economic controversy that had a conspicuous political side. The new Corn Law of 1815 gave birth to a multitude of pamphlets and books on the corn laws, and eventually, after HUSKISSON'S reforms, to the movement that took shape in the ANTI-CORN LAW LEAGUE, and was kept up vigorously by the MANCHESTER SCHOOL of Free Traders. Concurrently with this movement and later in its political victory came the agitation for extension of the FACTORY ACTS, with a literature of its own. The discussions in regard to emigration (see SELKIRK) and (later) colonisation (see TORRENS, WAKEFIELD, and HILL-BURTON) as well as in regard to the reform of the poor law, produced not only small tracts but large volumes in which economists still find useful materials. The value of English blue books on such topics can hardly be over-estimated, and since the establishment of a labour department (1893) their usefulness in this particular field may be expected to increase. Where economic policy has touched closely the business of the City, as in the Bank Charter Act, the repeal of protective duties, and the repeal of the navigation act, commercial men have taken the lead in the composition of pamphlets contending for or against particular measures by the aid, as a rule, of a popular political economy. Yet on such matters as banking and the foreign exchanges such pamphlets have not unfrequently achieved a permanent place in classical economic literature.

The great development in the last seventy years or organisation among the working classes has led to considerable modifications of economic theory (see WAGES FUND). This organisation has shown itself most notably: (1) in trade unions and other benefit societies among skilled labourers; (2) in co-operative societies for sale of goods. The former are federated somewhat loosely in the trade union congress, the latter very compactly in the co-operative union. Hitherto co-operative production in the sense of partnerships of workmen has not advanced rapidly. The latest phases of the organisation of the working classes are: (1) the growth of trades societies among women, and especially (2) the "new unionism," which has two chief features (*a*) the organisation of unskilled labourers, (*b*) the policy of united action by all the organised groups when the interest of perhaps only one is at stake. These movements have undoubtedly influenced politics in the direction of greater interference by the state than was contemplated by our forefathers.

Indications that political economy has not lost its attractiveness for the English mind may be seen in the foundation of the British Economic Association (1890), its organ the *Econ. Journal* (1891), and indeed in the present *Dictionary*. The *Econ. Review* (1891) covers partly the same ground, though not so strictly economic as the *Econ. Journal*. The Cobden Club is still on the watch against protection and over-interference of the state. The Statistical Society has a journal coeval with the society, embodying its transactions, with much other valuable matter. The *Economist*, under the editorship of such men as Wilson, Bagehot, and Palgrave, has done valuable service in presenting clear, vigorous, and solid economic argument on questions of the day. With the *Statist* it represents on the whole the views of the economists of the City. The *Banker's Magazine* does the same for the world of bankers. Many papers of a strictly economical character (especially those of Jevons and Giffen) have been published in journals like the *Contemporary Review*, not addressed to professional economists but to the educated public generally. It is to be regretted that fugitive economic literature, whether in pamphlets or articles, has not yet found its historian; J. R. M'Culloch attempted the work in his *Literature of Political Economy* (1845), with a fair measure of success.

The series of volumes edited by M'Culloch (printed for the Political Economy Club and Lord Overstone), in some degree supplement his work, at least for the early part of the period above treated; their titles are: *A Select Collection of Scarce and Valuable Tracts on Money*, London, printed for the Political Economy Club, 1856.—*A Select Collection of Early English Tracts on Commerce*, London, printed for the Political Economy Club. 1856.—*A Select Collection of Scarce and Valuable*

Tracts and other Publications on Paper Currency and Banking, printed by Lord Overstone, London, 1857.—*A Select Collection of Scarce and Valuable Tracts and other Publications on the National Debt and the Sinking Fund*, printed by Lord Overstone, London, 1857.—*A Select Collection of Scarce and Valuable Tracts on Commerce*, printed by Lord Overstone, London, 1859.—*A Select Collection of Scarce and Valuable Economical Tracts*, printed by Lord Overstone, London, 1859.—*The Evidence given by Lord Overstone before the Select Committee of the House of Commons of 1857 on Bank Acts*, London, Longman, Brown and Co. 1857.—*Tracts and other Publications on Metallic and Paper Currency, by the Right Hon. Lord Overstone*, London, Longman, Brown and Co., 1858.

[In addition to M'Culloch's *Literature* there may be consulted :—Prof. Travers Twiss, *View of the Progress of Political Economy in Europe since the 16th century*, 1847.—Prof. Adolf Held, *Zwei Bücher zur socialen Geschichte Englands* (1881, especially bk. i., *Sociale und politische Literatur von 1776 bis 1832*).—Prof. J. K. Ingram, *A History of Political Economy* (from *Encycl. Britann.*), 1887.—Prof. H. S. Foxwell, "The Economic Movement in England" (*Harvard Quarterly Journal of Economics*, vol. ii. 1887).—L. L. Price, *A short History of Political Economy in England from Adam Smith to Toynbee*, 1891.—Prof. L. Cossa, *Introduzione allo studio dell' economia politica*, 1892. Eng. trans. (L. Dyer), 1893.—W. Cunningham, *Growth of English Industry and Commerce*, and List of Authorities, 2nd ed., 1892, and *Christianity and Economic Science*, 1914.—Böhm-Bawerk, *Capital and Interest*, 1890 ; *Positive Theory of Capital*, 1891 ; both trans. by Smart.—W. Smart, *An Introduction to the Theory of Value*, 1891.—*Studies in Economics*, 1895.—*The Return to Protection*, 1904.—*Economic Annals of the 19th century*, 1910.—M. Pantaleoni, *Pure Economics*, trans. by T. B. Bruce, 1898.—J. S. Nicholson, *Principles of Political Economy*, 3 vols., 1901.—*Elements of Political Economy*, 1903.—*A Project of Empire*, 1909.—H. Sidgwick, *Principles of Political Economy*, 3rd ed., 1901.—N. G. Pierson, *Principles of Economics*, 2 vols., trans. by A. A. Wotzel, 1902-12.—The Right Hon. C. Booth, *Life and Labour of the People in London*, 2nd ed., 1903.—J. B. Byles, *Sophisms of Free Trade and Popular Political Economy, examined*, edited by W. S. Lilly and C. S. Devas, 1903.—C. F. Dunbar, *Economic Essays*, 1904.—F. List, *The National System of Political Economy*, trans. by S. S. Lloyd, introd. by J. S. Nicholson, 1904.—Goschen, *Essays and Addresses on Economic Questions (1865-1893)*, 1905.—A. C. Pigou, *Principles and Methods of Industrial Peace*, 1905.—*Protective and Preferential Import Duties*, 1906.—S. Leacock, *Elements of Political Science*, 1906.—Irving Fisher, *Nature of Capital and Income*, 1906.—*Rate of Interest*, 1907.—A. Marshall, *Principles of Economics*, 5th ed. 1907.—E. R. A. Seligman, *Principles of Economics*, 1907.—C. Gide, *Principles of Political Economy*, trans. by C. W. A. Veditz, 2nd ed.—B. S. Rowntree, *Land and Labour, Lessons from Belgium*, 1910.—Sir Henry Wood, *Industrial England in the Middle of the 18th Century*, 1910.—For financial history, Prof. C. F. Bastable, *Public Finance*, 1903.—*Theory of International Trade*, 1903.—Prof. E. R. A. Seligman, *Incidence of Taxation*, 1892.—Anton Menger, *The Right to the Whole Produce of Labour*, 1899, trans. by M. E. Tanner, good for early part of the century and history of English socialism.—Karl Marx, *Capital*, trans. from 2nd German edition, 1907, good for history of factory legislation and for references to the minor economic literature.—The *Political Economy* of Dugald Stewart (2 vols., ed. Sir Wm. Hamilton, 1855) is a mine of references to the pamphlet literature of the end of the 18th century.—E. Cannan, *History of the Theories of Production and Distribution in English Political Economy*, 1776-1848, 8vo, 1893.—J. Bonar, *Philosophy and Political Economy*, 1893.—Schulze Gävernitz, *Zum Socialen Frieden*, 1890. J. B.

ENGROSSING. See FORESTALLERS and REGRATORS.

ENREGISTREMENT, Fr. One of the principal divisions of the French finances, consisting of a registration duty on all deeds and documents, including notarial acts, judgments, contracts, sales, leases, indentures, wills, insurance policies, loans, articles of association, successions, transfers of property, etc. The registration dues have been frequently criticised for their exaggeration. M. Leroy Beaulieu describes them in his *Traité de la Science des Finances*, as a fiscal brigandage. He admits the utility of registration as a record of transactions in case of loss of the original deeds, but adds that the tax is only justifiable provided that it is of moderate amount, whereas as it is established in France it frequently becomes a confiscation of private fortunes by the state. The effect of this heavy charge is to restrict the free circulation of such property. T. L.

[*Code annoté de l'enregistrement et du timbre*, par Dalloz et Vergé, Paris, 1878.—*Annuaire de l'administration de l'enregistrement*, P. Dupont.]

ENSENADA, ZENON DE SOMODEVILLA Y BENGOECHEA, Marquis de la (1702-1782), died in Medina del Campo. Belonging to a noble but poor family, through his personal merit, he rapidly rose to the highest rank, made an immense fortune, and received the title of marquis in 1736 from the Infante Don Carlos, afterwards Charles III. of Spain.

Ensenada was one of the most efficient finance ministers of Spain. Under his administration, the ordinary revenue rose in a few years from 211 to 360 millions of *reales* (say from 21 to 36 millions sterling), although he contrived to alleviate the pressure of the enormous and vexatious taxation which oppressed the lower classes of the population. He put an end to the scandalous exactions of the farmers of the *rentas reales* (royal taxes). He established *registros* or register ships, which were allowed to trade with America independently of the *flota* and galleons. The flota was the annual fleet between Spain and her American colonies, the galleons were the

trading vessels escorted by the fleet. He formed the design of doing away with the *millones* or numerous minor excise taxes and tolls which weighed on every transaction of daily life, and of compensating the resulting deficiency by a better management of the customs and of the excise on salt and tobacco, and by establishing in Castile the *unica contribucion* or single tax, which was to be of 4 per cent on every species of income and property. It had been suggested for more than a century by the majority of Spanish economic writers and introduced into Catalonia in 1729. The preliminary survey or *catastro* was begun under his direction. Ensenada also abolished the internal duties, which interfered with the transport of corn from one province to another, and improved the means of internal communication. The royal navy, military ports, and arsenals were the object of his incessant and successful exertions, which were extended to almost every branch of government.

Ensenada's views and plans are explained in clear and straightforward language in the *Representaciones*, which he submitted to King Ferdinand VI., and which have been given in full for the first time in Don Antonio Villa's excellent biographical essay (*El Marques de Ensenada*, Madrid, 1878). One of them, written in 1751, will be found, although not quite complete, in the *Semanario Erudito* of Valladares (Madrid, 1788, vol. xii. p. 260), and in French in the French translation of Coxe's *Memoirs of Spain under the Bourbon Kings*, published by Andres Muriel in Paris in 1827 (*L'Espagne sous les rois de la Maison de Bourbon*, vol. iv. p. 282). Coxe gives a very favourable account of the internal administration of Ensenada (ch. liv.); which will be discussed in a special notice by Count Fernan Nuñez in his *Vida de Carlos III.*, now (1892) in the press. E. Ca.

ENTAIL, Law of. An entail is defined by Wharton (*Law Lexicon*) as "an estate settled with regard to the rule of its descent." The object of legislators in recognising entails has been to preserve estates undiminished in the hands of successive generations of the same family. This fixity of landed property was essential to feudalism, which based the political rights and duties as well as the social consideration of each individual on his relation to the land. Feudal law, therefore, regulated the disposition and devolution of land less with reference to the wishes of the owner or to the increase of the riches of the community, than with reference to the permanence and efficiency of the feudal organisation. Feelings of family pride deepened by feudal ideas contributed in turn to perpetuate the system of entails which had fostered them. But in the main the system of entails is a political institution.

In one form or another the system of entails may be traced in every country where feudalism established itself. In many of those countries it disappeared in the series of political changes which opened with the French Revolution. In England, however, it has survived, but with many modifications which have almost destroyed its identity. The English law relating to entails may be considered under three heads:

I. The doctrine of "estates" in land; II. the practice of making settlements of land; III. the modifications recently made in the law relating to land.

I. The unity of ownership, so prominent in Roman law, is almost lost in the feudal land law. In England land is not technically an object of private ownership, since the crown is supreme lord of all the land of England. Private persons can only have *estates*, *i.e.* interests more or less extensive in land. Many different persons may have estates or interests in the same piece of land. In freehold land there are three different estates: (*a*) estate in fee simple, (*b*) estate tail, (*c*) estate for life. Estate in fee simple or an estate *to a man and his heirs* is practically, although not technically, the same thing as full ownership. The tenant in fee simple has the fullest power of enjoying and disposing of the land. An estate tail is an estate to *a man and the heirs of his body*, *i.e.* to a man and his descendants. It may be an estate in tail male, *i.e.* descending only to male offspring, or an estate in tail female, *i.e.* descending only to female offspring, or an estate in tail special, *i.e.* descending only to offspring by a particular wife. But estates in tail special, are, in practice, very uncommon. When the offspring of the tenant in tail are all deceased, the estate tail is at an end and the land reverts to the grantor of the estate tail or to his representative. Thus an estate tail is a smaller interest in the land carved out of the fee simple estate. When there is an estate tail in one party there must be a reversion in fee in another party. An estate given to a man and the heirs of his body was at first regarded as a fee simple estate given conditionally upon the birth of issue. When the tenant had issue he acquired the right of alienating so as to defeat the rights of his heirs and also of the reversioner. By the statute De Donis Conditionalibus (13 Ed. I. c. 1), the power of alienation was entirely taken away. But within two centuries the lawyers invented methods of evading the statute, namely, the collusive actions known as Fines or Recoveries, whereby the tenant in tail could once more alienate his land, and defeat the rights of heirs and reversioners. By the Act for the Abolition of Fines and Recoveries (3 & 4 Will. IV. c. 74), these actions were superseded and the tenant in tail was enabled to attain the same object by simply executing a deed to that effect and having it enrolled in

a public office. Thus a tenant in tail can turn his estate tail into an estate in fee simple, and acquire virtually unrestricted ownership. An estate for life does not descend to offspring of the tenant, and cannot be enlarged so as to extinguish the rights of the reversioner. The position of the tenant for life at common law, and previously to certain modern statutes, was that of a usufructuary, who might enjoy the income, but might not change the character, much less impair the capital value, of the property. Thus he could not open mines, fell timber, or plough up old meadow land. Nor could he dispose of the land by way of gift, sale, or exchange, or lease it for more than a very limited period. He has been recently invested with very wide powers which will be explained later on.

II. The settlements of real estate in use date from the 17th century. When a landowner executes a settlement, he usually reserves a life estate to himself and gives an estate in tail to his eldest son with remainders in tail to his other sons. The eldest son, when born, acquires an estate in tail to take effect after his father's death. Such a future estate in tail cannot be barred without the consent of the tenant for life, who is called the protector. If the son held out till his father's death, he would become tenant in tail in possession, and then could bar the entail and get an estate in fee simple. But whilst his father lives he has nothing. Therefore, when he wants an establishment of his own, he has every reason to join with his father in making a new settlement similar to the old one. Thus the perpetuation of an estate in the same family is ensured. But the powers of a tenant for life at common law were not enough even for the proper management of an estate. In every well-drawn settlement there were appointed trustees, invested with powers of selling, exchanging, or leasing parts of the estate and of executing permanent improvements and charging the estate with the cost thereof. These powers the trustees were to exercise only with the consent of the tenant for life and with a view to the interest of all persons entitled under the settlement.

III. The modifications recently made in the law amount to bestowing upon the tenant for life powers similar to those bestowed upon the trustees by the settlement. A series of statutes of Queen Victoria's reign ending with the Settled Land Act of 1882 has annexed to the character of tenant for life the fullest powers of alienating the whole or parts of the estate, and of employing the proceeds either to buy other land or to pay off encumbrances on the fee simple, or to make permanent improvements, or to invest in certain specified securities. The tenant for life now combines two totally distinct characters: his former character of usufructuary, and his new character of trustee for all parties (himself included) who have an interest under the settlement. The settled estate is now to be regarded not so much as land, but as capital which happens to be invested in land, but may be invested otherwise at the discretion of the tenant for life. It remains to notice the objections made by economists against systems of entail generally, and to consider how far they are applicable to the system of entails now existing in England. These objections are principally two: I. entails check the improvement of land; II. entails restrict the transfer of land.

I. Entails check the improvement of land, and so lessen the wealth of the community; because the limited owner, as compared with the absolute owner, has (*a*) less motive to improve and (*b*) less power of improving. (*a*) The limited owner has less motive to improve his land, because he cannot dispose of it by sale or testament, and because the property will all go to one son, without affording a provision for the other children. Hence the limited owner is exposed to the temptation of desiring to apply the whole income of the land, either to his own purposes or to making a provision for daughters and younger sons. The English tenant for life cannot now be deprived of the power of selling his land, but he can touch only the income of the proceeds. This objection, therefore, is lessened rather than removed by recent legislation. (*b*) The limited owner lacks power to improve the land, because (i) his freedom of action has been narrowly regulated by law. (ii) His land may have been encumbered with charges created in favour of other members of his family, which lessen the net income; (iii) he has to make provision for children other than the heir, and is thus further straitened.

(i) The English tenant for life (see Settled Land Act, 1882), has now the legal right to do almost anything which the tenant in fee simple could do. His means for permanent improvement are now much greater than they were formerly, since he can sell part of his land in order to raise capital for improving the rest. He can do this without impoverishing his younger children, as the land which he sells would under the settlement have gone to the eldest son. (ii) The charges on the land to provide a jointure for the widow of the late tenant for life, and portions for the younger brothers and the sisters, are not affected by recent legislation. They form deductions from the gross income of the tenant for life, and lessen his means of improvement. (iii) The tenant for life still has to provide for his younger children, and may thus be tempted to set apart for them money which might with advantage be spent on improving the land. Recent legislation, therefore, whilst much enlarging the powers of improvement possessed by a tenant for life, has

not put him upon an equality in this respect with the tenant in fee simple.

II. It is said that a system of entail deprives landowners of (*a*) the power, (*b*) the motive to sell their land, and thus produces the following evils:—(i) the retention of land in the hands of persons who may be too impoverished to improve it; (ii) the exclusion of capital from being employed in the improvement of land which under a system of free sale would be purchased by capitalists; (iii) a restriction in the number of landowners, which diminishes the stability of society; and (iv) the removal of a strong motive to industry and economy in the labouring class, namely, the hope of becoming the owner of a piece of land.

That the power to sell is wanting, under a complete system of entail, is clear. That it is not wanting under the modified system of entail now existing in England is also clear. The motive to sell is still wanting to the tenant for life, in so far as he cannot appropriate the capital sum paid by the purchaser. But, since his income is much reduced by prior charges, and by the necessity of saving for children other than the heir, he has the strongest inducement to exchange an investment like land, which at the present day rarely pays more than 2 per cent, for investments like railway debentures, which pay 3 per cent. For the increase of return all goes to swell his income, the charges upon it remaining the same.

Under the Settled Land Act, a good deal of land has been sold in England. But hitherto land has been offered for sale mostly in large masses. For this there are several reasons:—(i) the influence of habit upon those who conduct the sale of land; (ii) the extravagant expenses connected with making out a title, which may be as heavy for a small piece of ground as for a large estate, and so act as a prohibitory tax on sales of small parcels; (iii) the present condition of the market for agricultural produce which represses any strong desire, in the English middle or lower class, to become freeholders. Energetic persons engaged in agriculture prefer to employ their capital in working a large farm rather than in buying a small one. Other small capitalists dislike so risky and unproductive an investment as land is at the present time. For all these reasons the estates which have come into the market have generally been bought undivided by wealthy men who can afford to place great sums in a sort of property which gives social consideration and out-of-door amusement, but yields only a paltry return in money. Thus the sales which have taken place in England are not believed to have much increased the number of landowners. In Wales, the tenants sometimes buy their farms when offered for sale. In Ireland the tenants are almost the only purchasers. In those countries the number of landowners is thus increasing. Moreover, as small owners rarely make family settlements, an increasing part of the land in Wales and Ireland is no longer subject to a system of entails, but is held by tenants in fee simple.

[For the legal learning of entails, the reader may consult Kenelm Digby's *History of the English Law of Real Property*.—Williams' *Law of Real Property*.—Goodeve, *Modern Law of Real Property*.—*The Land Laws*, by Sir Frederick Pollock (English Citizen Series), and many other text-books, together with the statutes and leading cases to which they make reference. Some interesting observations upon the rise of feudal systems of tenure, upon entails and primogeniture, will be found in Maine's *Ancient Law*, ch. vii., and *Early Law and Custom*, ch. ix.

Of the writers who have considered entails in their economic aspect, only a few can be mentioned here: Adam Smith, *Wealth of Nations*, bk. iii. ch. ii., who dwells on the injustice to younger children caused by entails, and asserts in terms much too absolute the improbability of a great proprietor executing great improvements.—M'Culloch, *Principles of Political Economy*, who justifies primogeniture by its effect in raising the fashionable standard of living, and so giving an impetus to the pursuit of wealth.—Mill, *Principles of Political Economy*, bk. v. ch. ix., who condemns entails partly as encouraging idleness and extravagance, partly on the grounds above explained at length.—Boyd-Kinnear, *Principles of Property in Land*.—Cliffe Leslie, *Land Systems and Industrial Economy*.—A volume of the Cobden Club Essays, entitled *Systems of Land Tenure in various Countries*.—George Brodrick, *English Land and Landlords* (also included in the Cobden Club Essays).—Shaw Lefevre, *English and Irish Land Questions*.—Arthur Arnold, *Free Land*.—Kay, *Free Trade in Land*, etc. None of these writers can be said to have fully considered the latest stage of the English law relating to this subject, and therefore many of their criticisms are partially obsolete.] F. C. M.

[Refer for other sides of the question to BEQUEST, POWER OF; MORCELLEMENT.]

ENTAIL (SCOTLAND) anciently and still sometimes called tailzie, from Lat. *talliatum*, cut off; any deed by which the ordinary legal course of succession is cut off and a fresh one substituted. The power to create an entail, previously doubtful in Scotland, was definitely given by the act 1685 c. 22. Every proprietor in fee since that date may grant a simple destination which merely names a succession of heirs, each one of whom may dispose of the estate as he pleases, and whose successor in the destination merely takes in default of such disposition, or he may protect the succession he prescribes by restrictive clauses forbidding any interference with the succession by selling, alienating, or disposing of the lands, contracting debt, or doing any deed whereby the succession might be frustrated. These clauses must be inserted in all title-deeds, and the entail with the judicial authority of the court of session

must be recorded. Every act or deed contravening these restrictions was declared null, and the real heir might, on contravention, take up the estate. In 1770 the heir in possession of entailed lands was allowed a modified power of leasing, and of charging against future heirs a proportion of the expense of improvements on the property by the Montgomery Act, 10 Geo. III. c. 51. Further relaxations were granted in 1824 by the Aberdeen Act, 5 Geo. IV. c. 87, enabling an heir of entail in possession to make limited provisions in favour of a husband or wife or children, which were payable by the successors out of the yearly rents or proceeds, but did not affect the fee of the entailed estates; by the Rutherfurd Act 1848 the fee may now be charged in favour of younger children. But no powers either under the Montgomery Act or the Aberdeen Act could be exercised so as to deprive the successors of more than two-thirds of the free yearly rents. In 1836 the Rosebery Act, 6 & 7 Will. IV. c. 42, gave the heir in possession a limited power to sell parts of the estate for the entailer's debts under the authority of the court of session. In 1848 the Rutherfurd Act, 11 & 12 Vict. c. 36, first conferred on an heir of entail in possession the power to disentail. Elaborate and intricate provisions were made by the Rutherfurd Act distinguishing between entails made before and after its date, and heirs in possession who were born before or after that date, with regard to the consents required to disentail. Broadly speaking, if the heir in possession was born before the act and the entail was made before the act, he requires the consent of all the heirs if less than three, or of the next three heirs, or of the heir apparent and two of the heirs who would, including the heir apparent, be successively heirs apparent, provided the nearest heir be twenty-one years old; or if such consents be refused by any heir, even, since 1882, the nearest heir for the time, the court may assess the value of the heir's interest and dispense with his consent on the payment to him of the value of his interest, or sufficient security for such payment. The next heir in succession thus receives a lump sum for his expectancy instead of getting, as in England, the interest of the purchase money if and when he succeeds in lieu of his interest in the land. The distinction between old and new entails is now removed. Other powers now possessed by heirs in possession of entailed estates are—to sell under the same conditions as those of disentailing, to excamb, or exchange, any portion of the entailed estate for an equivalent in contiguous lands, without any consent, taking or giving not more than £200 for equality of exchange, to grant feus and leases, to charge improvements, and to charge family provisions in favour of the wives, husbands, or children of heirs of entail in possession.

[Rankine, *Land Ownership*, chap. xxxiv.—Bell's *Principles*, § 1716, *et seq.*—Duff on *Entails*.—Duncan on *Entail Procedure*.] J. W. B. I.

ENTREPÔTS. A term applied in France and other countries to places of deposit for goods, analogous to the bonded warehouses in the ports and trade centres of the British Empire. In them articles subject to custom or excise duties may be placed, until time of payment of the imposts to which they are liable on delivery for consumption, or until removal for the convenience of trade, or exportation to foreign countries. In the latter case the importers are relieved altogether from the necessity of the revenue payments, and in the others this outlay need not be incurred until such time as the consumers are ready for their use. In this country, where an immense transit trade centralises, where the operations are often of great magnitude, and the few duties retained are great in proportion to the prime cost of the articles, the facilities afforded by this system permit of much trade being carried on which would otherwise be cramped or altogether prevented. The use of capital is economised, and excessive fluctuations in price are checked by the large stocks it is possible to retain on hand, as well as the speed with which supplies may be transferred to the consumers, at a lessened cost for time and money expended. On the other hand, the care bestowed upon their safe custody, and the supervision of the necessary operations, such as sorting, vatting, and other processes, constitutes a charge upon the revenue for the benefit of the consumer or trader.

These observations apply with much greater force to the "entrepôts" established in France and elsewhere, because of the multitude of articles which have, for the security of the revenue, to be taken in charge, at a considerable cost if the supervision be effectual, or of risk if it be insufficient. There, too, it is not only the national revenue which, as here, has to be safeguarded, but also the municipal tolls in the shape of *octroi*. It is mainly this which has led to the division of these *entrepôts* into "*réels*" where the goods are actually kept in custody, and "*fictifs*," nominal or conventional, where the owner has them in his own charge, but is answerable for the payment of the duties to which they are liable. See also BONDED WAREHOUSES.

[*Nouveau Dictionnaire d'Économie Politique*, 1891, vol. i. p. 898; and *Dictionnaire des Finances*, 1889, vol. ii. p. 118.] S. BO.

ENTREPRENEUR. An alternative name for the employer (see EMPLOYERS and EMPLOYED). Adam Smith (*Wealth of Nations*, bk. i. ch. vi.) used the term "undertaker," and J. S. Mill (*Political Economy*, bk. ii. ch. xv. § 1 footnote), expresses his regret that "this word, in this sense, is not familiar to an English ear." He adds that "French political economists enjoy a great advantage in being able to

speak currently of 'les profits de l'entrepreneur'"; and it seems that, partly perhaps in consequence of this, political economy has in France avoided the mistake committed by some of the older English economists in failing to distinguish the functions of the employer and his share in the produce of industry as such from the functions and share of the capitalist as such. General F. A. Walker (*Wages Question*, ch. xiv.) echoes Mill's regret that "we have not a single English word which exactly fits the person who performs" the office of the employer in modern industry. "The word undertaker," he remarks, "at one time had very much this extent," and so had the word "adventurer." But they have since acquired other senses. The "French word entrepreneur," however, he adds, "has very nearly the desired significance, and it may be that the exigencies of politico-economical reasoning will yet lead to its being naturalised among us." L. L. P.

[See also FRENCH SCHOOL.]

ENTRY, BILL OF. The name given to an office within the custom house at London, and other ports of the United Kingdom, from which there issue daily lists of ships arriving and sailing, with accounts of their cargoes, deliveries from bonded warehouses, and other particulars of considerable interest to the mercantile community. In addition to these printed publications, manuscript accounts are rendered to those who may desire such special information as can be gleaned from the customs records, or may be compiled from the various documents and forms supplied for customs purposes. The printed lists are sold to subscribers, and the special returns are paid for in proportion to their length or the trouble involved in their preparation, for the exclusive use of those at whose expense they are compiled.

The history of this arrangement is somewhat peculiar; it is, or was until recently, a remnant of the old times when special privileges were conferred on favoured individuals for their pecuniary advantage, or in return for payments made by them. One of these acquired, in 1660, by letters patent, the exclusive right of access to all official documents connected with the customs reports and entries, and of obtaining and publishing any portion of the information they furnished. Ultimately, in 1817, this right became vested in the Customs Annuity and Benevolent Fund—a mutual insurance fund supported by payments of the officers themselves, supplemented by the profits of the bill of entry, and devoted to the sole benefit of their widows and orphans. Through the energy and wisdom of the directors this had grown to be a valuable business, which, at the expiration of the crown patent, in 1880, the treasury appropriated to its own benefit, and it is now profitably carried on by the commissioners of customs. The public funds thus became possessors of a private property created by independent exertions on behalf of a charitable purpose.

The existence of such a source of information is of great advantage to merchants, statisticians, traders, and shipowners, by enabling them to obtain correct knowledge on points too minute, too varied, and too numerous to be set forth in the periodical returns of trade and navigation laid before parliament.

[*Reports of Commissioners of Customs.—Bill of Entry*, Journals A and B.—Bourne, *Royal Statistical Society's Journal*, vol. xxxv. pp. 214-215, 1872.] S. Bo.

ENTRY, RIGHT OF. The payment of the rent, and the performance of the covenants in a lease, are usually secured by a "condition or proviso for re-entry," which enables the landlord on non-payment of the rent or non-performance of the covenants, to take possession of the premises let, as if no lease had been made. The courts of equity and the legislature have, in a certain measure, succeeded in preventing landlords from making any oppressive use of this power. Thus a tenant who has been ejected in consequence of the non-payment of rent may be reinstated if he pays the rent and costs within six months after the execution of the judgment. As regards the non-performance of covenants, not relating to the payment of rent, and not belonging to one of the excepted classes referred to below, a right of re-entry or forfeiture is not enforceable unless the tenant has failed to comply with the terms of a notice specifying the breach and requiring him to remedy it and to pay compensation in money in respect of it (Conveyancing Act, 1881, § 14). In such cases forfeiture is therefore impossible, except when the breach is wilful and persistent. The rule just mentioned does not, however, extend to covenants against assigning and underletting, and the omission to obtain the landlord's consent to an assignment or underlease of the premises may lead to the forfeiture of the lease although it was due to forgetfulness on the part of the tenant's solicitor, and although the landlord would not, under the circumstances, have withheld his consent if asked for (Barrow *v.* Isaacs [1891], i.; Queen's Bench, 417). The attempts to induce the legislature to enact some provisions more favourable to tenants in respect of such covenants have proved abortive, and their only result has been § 3 of the Conveyancing Act of 1892, which provides that in the absence of an express agreement to the contrary, a landlord shall not make his consent to an assignment or underletting dependent on the payment of a sum of money beyond a reasonable amount in respect of expenses. Conditions for forfeiture on the bankruptcy of the tenant, or on the taking in execution of the tenant's interest, were also originally excepted from the rule granting relief

as stated above; but it is now provided by §§ 2 and 3 of the Conveyancing Act of 1892 that, subject to certain exceptions, a lease is not to be forfeited in such a case, unless the tenant's interest remains unsold within a year after the date of the bankruptcy or of the taking in execution. The practical importance of the exception is materially reduced by this alteration. E. S.

ENUMERATED COMMODITIES. This term has two distinct meanings, according as it is applied: (1) to the European trade of England; (2) to the colonial trade of England. In both cases it refers to commodities which were originally enumerated in the Navigation Act of 1660, but which were altered from time to time by subsequent legislation.

(1) With regard to the European trade, the first Navigation Act in 1651 forbade the importation of European products except in British ships, or ships of the country where the goods were produced, or from which they could only be, or most usually were, exported. The second Navigation Act in 1660, while adopting most of the provisions of 1651, modified this particular article. It renewed the restriction about importation to (1) all Russian and Turkish products, and (2) certain enumerated commodities: viz. timber, salt, pitch, tar, rosin, hemp and flax, raisins, figs, prunes, olive oils, all kinds of corn or grain, sugar or potashes, wines, vinegar and spirits (12 Car. II. c. 18, § 8). All other European goods could be imported in any vessel. Two years later a further restriction was made, and it was provided that certain goods should not be imported into England in any ship whatever from Germany, Holland, and the Spanish Netherlands. This second list of enumerated commodities included all wines other than Rhenish, spices, grocery, tobacco, potashes, pitch, tar, salt, resin, timber, and olive oil (13 & 14 Car. II. c. 11, § 23). Changes in the enumeration were made at intervals in obedience to momentary pressure or changing interests. But no great relaxation of the system of 1660 and 1662 was made till 1822, when the importation of enumerated goods was extended to ships of the country or place from which they were imported; and at the same time the exceptional restrictions upon trade with Germany, the Netherlands, Russia, and Turkey, were abolished (3 Geo. IV. c. 43, § 6). The distinction between enumerated and non-enumerated commodities disappears altogether after the repeal of the Navigation Act in 1849.

(2) As applied to the colonial trade, the term enumerated commodities had an equally important significance. The act of 1660 limited all trade, both of export and import, with British plantations in Asia, Africa, or America to British ships. But it added a distinction between those colonial products which could only be carried to England and those which might be carried, still in British ships, to countries other than England. The former, which are the enumerated commodities in this connection, naturally included all those commodities which England did not produce herself, or did not produce in sufficient quantity for her needs. The non-enumerated commodities, which included all those goods in which the home producers dreaded colonial rivalry, were originally allowed to choose any market outside England, but were ultimately limited to countries south of Cape Finisterre. The motive for this restriction was to prevent the manufacturing rivals of England from obtaining raw materials from our colonies. These and other oppressive regulations with regard to colonial trade were undoubtedly a chief cause of the revolt in 1774 of the American colonies, whose success dealt a fatal blow at the policy of the navigation acts, and in 1796 the United States were allowed to carry their goods in their own ships to Great Britain. In 1822, the distinction of enumerated commodities among colonial products became obsolete, and the colonies were allowed to export not only their own produce, but their imports from other countries, to any place in Europe, Africa, or America, either in British ships or in ships of the country to which they were exported (3 Geo. IV. c. 44, § 4, and c. 45, § 2).

[M'Culloch's edition of Adam Smith, note xi., and Leone Levi, *History of British Commerce*, pt. iii. ch. ii., give a clear account of the enumerated commodities in European trade. For the term as applied to colonial products see Adam Smith, *Wealth of Nations*, bk. iv. ch. vii. pt. 2.] R. L.

ÉPHÉMÉRIDES. About the middle of the 18th century proposals for reform both in finance and agriculture began to interest the French public. In 1751 a special review, the *Journal œconomique ou Mémoires, Notes et Avis sur l'agriculture, les arts, et le commerce*, was established in order to deal with these subjects. This journal contained essays both on practical and theoretical questions; the latter presenting restrictive as well as liberal views. Recommendations of free-trade in corn, and translations of works of English economists, as Josiah Tucker and Hume, strengthened the position of the French school of free trade who became afterwards the physiocrats. The *Gazette du Commerce*, established in April 1763, admitted the contributions of Le Trosne and St. Péravy as well as those of their opponents. The government, favouring these discussions on the corn policy, bought up this newspaper and connected with the *Gazette du Commerce* a special review, the *Journal de l'Agriculture, du Commerce, et des Finances* (1764). This *Journal* soon passed into the sole possession of the physiocrats and was their organ from September 1765 to November 1766. It ceased to appear in 1783.

Among the periodicals treating on subjects akin to those dealt with by the *Journal de l'Agriculture* was a weekly paper, the *Éphémérides du Citoyen ou chronique de l'esprit national* (6 vols. 12mo), established in December 1765, after the model of Addison's *Spectator*, by the Abbé Baudeau. He intended through its means to defend the interests of "humanism" by pleading for the abolition of slavery in the colonies. He, however, employed his organ to attack the Economists, professing for his own part mercantilist views and a detestation of free-trade. Le Trosne replied in the *Journal de l'Agriculture* of March 1766 to Baudeau; the latter answered, but soon desisted, for, after reading but half a page of Le Trosne's private observations on the futility of the "balance of trade," he abandoned his intention of continuing these polemics. Shortly after this the Marquis of Mirabeau brought Baudeau fully to agree with the physiocratic school. This event, *le saut de la science*, proved very important for the progress of the Economists. For the *Éphémérides* was ready to receive their contributions just at the time that the editor of the *Journal de l'Agriculture* put difficulties in their way (December 1766). After January 1767 the new organ appeared as a monthly review under the title *Éphémérides du Citoyen, ou Bibliothèque raisonnée des Sciences morales et politiques*. Baudeau remained its editor till May 1768, when his place was taken by Du Pont de Nemours. The most eminent writers of the physiocratic school contributed to this journal. Among the most interesting articles are the following:—Quesnay's "Essays on the Government of Peru" (1767, t. i.); he declares that the system of tithes in Peru proves its ancient government to have been the most prosperous and the fairest in the world.—On "Despotism in China" *signed* M.A. (1767, t. iii., iv., v., vi.), in which he describes Chinese political institutions as exhibiting "an order of essential stability," besides minor articles (1767, t. x., 1768, t. ii.); cp. Oncken's edition of Quesnay's *Œuvres*, pp. 660-692.—Mirabeau's "Letters on the Legal Order." In these he undertakes to give an historical account of the causes of economic legislation, and the study of the "physical" causes leading towards its reform (1767, t. ix., x., xi., xii.; 1768, t. i. to vi., viii. to xii.; 1769, t. i. to iii., v.).—On the economic education of girls; insisting upon the necessity of instructing them in the science of the natural social order (1768, t. iii.).—Dialogues between a child and its teacher, on the use of science to princes (1769, t. vi. to ix.).—Historical eulogies on Sully, whose merits as statesman and as a predecessor of the physiocratic school are dilated on (1770, t. iii. to xii.; 1771, t. i. to xi.).—Baudeau wrote "Avis au peuple sur son premier besoin," treating of a free trade in corn, the best manner of baking bread, and on its price (1768, t. i., ii., iv., v.). "Avis aux honnêtes gens, qui veulent bien faire," dealing with the effects of the bad harvest of 1769, and the methods pursued to cheapen the price of bread (1768, t. x., xi.; 1769, t. x.). An Explanation of the Tableau Économique to Madame de —— ("political economy made easy") (1767, t. xi., xii.; 1768, t. viii.; 1770, t. ii.). On luxury, its destructive effects on agriculture (1767, t. i. to iii.). "On the actual state of Poland," on the causes leading to its destruction by the Moscow policy (1770, t. ii. to iv., xi.; 1771, t. i., iii. to v.).—There are also some observations by Butré respecting agriculture on a large and a small scale, illustrated by accounts of farms and estates cultivated on the Métayer principle, and proving the unprofitable character of the latter (1767, t. ix., xi., xii.).—Among Du Pont's contributions his "Notice abrégée" containing the first sketch of a history of economics, particularly deserves mention (1769, t. i. to iv., vi., ix.; 1770, t. i. *avertissement*).—Among the latest important articles were Turgot's "Réflexions sur la formation et la distribution des richesses" (published in 1769, t. xi., xii., and 1770, t. i., but written in November 1766) and the "Abrégé de l'économie politique" by the Margrave of Baden-Durlach (1772, t. i.).—Minor articles were written by Roubaud, St. Péravy, Le Trosne, Morellet, Franklin.—Criticisms are also included directed against Linguet (1767, t. iii.; 1770, t. i.), who, in his *Théorie des lois civiles*, 1767, had taken no notice of the physiocratic conception of natural law, and in accordance with Hobbeism had declared that "l'esprit des lois—c'est la propriété"; Forbonnais, who is censured on account of his attacks against the physiocratic theory that trade was a simple exchange and not affording a "produit net" (1767, t. vi., ix.);—against the attempted refutation of their doctrine by Graslin, the author of an *Essai sur la Richesse et sur l'Impôt* (1768, vol. ii., iii., x.);—against the *Doutes adressés aux philosophes économistes* by Mably, who had from the communistic standpoint attacked the foundation of this system, the right of private property (1768, t. ii., iii., v. to viii.; 1769, t. v.).—The *Éléments généraux de Police* of Justi (1769, French edition), is shown to be a work of very shallow and contradictory views, which maintains the wisdom of grandmotherly regulations (1769, t. ii., iii.); Galiani's *Dialogues sur le Commerce des Bleds*, one of the wittiest productions of economic literature, is described as "un ouvrage charmant, qui renferme les plus jolis lazzis du monde" (1769, t. xi., xii.); Baudeau also criticised Beardé de L'Abbaye's *Recherches sur les moyens de supprimer les impôts, précédées de l'examen de la nouvelle Science*, 1770, a criticism directed against the single-tax theory (1770, t. vii.); and Pinto the mercantilist "Pindar of the stock exchange" (*Traité de la circulation et du*

crédit, 1771), (1771, t. x.). Besides these articles the review contained a chronicle of public events considered to be symptoms of the progress of the doctrine of the physiocrats: this includes the utterances of the French *parlements* in the provinces on the corn-trade; the emancipation of serfs in Denmark; the encouragement given publicly to agriculture by the heir-apparent of the crown (Louis XV. being king), the Dauphin Louis, who on the 15th June 1768 himself held the plough at Versailles (1768, t. vii.; 1769, t. viii.). Louis was followed in this by the Emperor Joseph II., who drove a peasant's plough, the 19th August 1769, at Slavikovitz in Moravia (1770, t. xii.). These events have been commented on by Diderot in a review which he wrote about the *Éphémérides*, in the following words: "Plough, plough as much as you will; I promise you that as long as matters stand on their present footing, the wheatsheaf growing under your royal hands will not nourish your peasants" (*Œuvres*, t. iv. p. 85). An account is given of an experiment made by the Marquis of Mirabeau and his son at Aigueperce in Limousin, to form a *bureau de conciliation*, composed of prud'hommes elected by the parishes, in order to avoid the frequency of lawsuits. The experiment was imitated by the Marquis de Sérent at Malestroit in Bretagne; it was a precursor of the modern boards of conciliation (1771, t. iii. p. 110-194; t. vii. p. 183, cp. Loménie, *Les Mirabeau*, t. ii. p. 79; t. iii. p. 59). This part of the *Éphémérides* contains some statements about financial reforms in foreign countries, especially of the experiment of a "single tax" on land (*impôt unique*) in Baden (1771, t. iv., v., vi., vii.), with the performance of which Schlettwein was entrusted in the village of Dietlingen (1770) (see IMPÔT UNIQUE).

The *Éphémérides* was suppressed by the Controller-Général, the Abbé Terray, in November 1772 (t. iii. is the last of the sixty-three volumes of this series). The editors sought in vain to connect themselves with other journals. It is characteristic of him that, after being forbidden to publish the *Éphémérides* in 1772, Du Pont continued to work in their line by issuing a fortnightly *Correspondance littéraire et politique* in MS., and to send transcripts to the monarchs interested in the physiocratic doctrines (cp. *Carl Friedrichs von Baden brieflicher Verkehr mit Mirabeau und Du Pont*, edited by Carl Knies, Heidelberg, 1892, vol. i. p. 151-152; cp. also vol. i. pp. 21, 56, 57, 61; vol. ii. p. 109 *seq.*, 197). After a three years' silence Turgot, who had become minister, enabled the Abbé Baudeau to resuscitate the review. It thus became almost an official organ intended to explain and justify Turgot's politics. In December 1774 appeared the first part of these *Nouvelles Éphémérides Économiques, ou Bibliothèque raisonnée de l'Histoire et de la Politique* (18 vols., 12 in 1775, 6 in 1776). The *Journal de l'Agriculture* too became again an organ of the physiocratic school under the direction of Abbé Roubaud. Among the contents of the *Nouvelles Éphémérides*, the following are remarkable: "Letters and Memoirs written to a Magistrate of the Paris Parliament on the Arrêt of September 13th, 1774," by Baudeau (1775, t. i.) This is an historical and theoretical interpretation of the causes which lead on to Turgot's celebrated ordinance, by which the free circulation of corn in the provinces of France was established and its free exportation abroad was made the object of future decisions of the government (see Turgot, *Œuvres*, 1844, t. ii. p. 169).—Bigot de Ste. Croix's posthumous *Essay on the Abuse of Exclusive Privileges, on the Freedom of Trade and Industry* (1775, t. i. iii.), is a literary forerunner of the abolition of corporations by Turgot.—The third part of vol. i. (1775) opens with an *Éloge funèbre de M. François Quesnay*, delivered by the Marquis de Mirabeau four days after the master's death, the 20th December 1774. T. v. of the same year contains an historical eulogium of Quesnay by the Count d'Albon.—Baudeau again contributes inquiries and historical memoirs on the finances of France from Louis XII. to Louis XV. (1775, t. ii., iii.), and a refutation of an author who had written in defence of the Corvée system.—The Marquis de Pezay writes an essay on *The Fortification of the Military Frontiers of Alsace*.—Fréville inserts a translation of extracts from A. Young's *Eastern Tour through England* (1775, t. ii. iii.), and *On the Present State of British Commerce* (1775, t. viii.) Turgot's ordinance, which allows again leases of twenty-nine years' duration (January 2, 1775) is published as a memorable event (t. ii.).—The general aspects of the school are dealt with in a *Letter on the Economists* (1775, t. iii.); in this the contrast between formal liberty, adhered to by the economists, is contrasted with the postulate of economic equality and the latter declared unnatural. Still the fundamental principle of the economists is declared to be the truth, that "the particular happiness of individuals can only be reasonably and firmly established upon the basis of the general happiness of the whole race" (1775, t. iii. p. 59). The philosophical and political ideas of the physiocratic school are embodied in a *Memoir on Public Instruction* by Mercier de la Rivière (1775, t. ix. x.), and in Roubaud's *Political Reflections on America* (1776, t. iii.), which are full of sympathy for separation of the colonies from England.—Finances are dealt with in *Reflections of a Citizen on the financial administration of great cities, and especially of the City of Lyons* (t. iv.), written to oppose indirect local taxation; they exhibit the destructive tendency of the physiocratic doctrine for local life by subjecting it to central government. An essay

is directed against the heavy taxation of tanneries after 1759 (1775, t. iv., also 1776, t. iv.), and of salt, spirituous liquors and tobacco; this essay, *Le Profit du Peuple et le Profit du Roi*, had been previously written in 1769 by Baudeau, and twelve copies only printed, 1775, t. iv.; cp. a letter to Baudeau on that subject in 1775, t. x., extracted from *Nouvelles de la République des Lettres* (Lausanne, vol. i. 1775); cp. also the criticisms on Baudeau's essay contained in *Nouv. Éph.*, 1776, t. ii. p. 70, taken from the *Journal Encyclopédique* of 1775, vol. viii. Other articles deal with the suppression of the duty on fish coming to Paris during Easter-time (1776, t. iv., and Turgot, *Œuvres*, ed. Daire, vol. ii. p. 402), and the suppression of a series of duties in Russia by Catherine II. (17th (28th) March 1775, t. vii.). Historical details are given relative to duties laid on eggs, butter, cheese (1776, t. i.), on wines coming to Paris (1775, t. v.), and likewise on such imports within Champagne (1776, t. iii.). A new method of levying the duty on brandy is described, and the weight of the impost of 1771 on the manufacture of paper, 33 per cent on the cheapest sorts, is complained of (1776, t. v.). A document, proving the antiquity of complaints on French finances, from the year 1415, is published in 1775, t. xi. An essay of Baudeau, written in 1768 was published for the first time in 1776, t. i., on the occasion of the abolition of the "Caisse de Poissy" on the 9th February 1776 (see Turgot, *Œuvres*, vol. ii. p. 316); this institution since 1743 had farmed the exclusive market right of meat for Paris to a company, which was entitled by it to take a duty of 6 per cent upon all sales of meat at Sceaux and at Poissy. Baudeau's article produced great irritation among the partners in the company, who brought an action against its author; the text of the latter is inserted in *Nouv. Éph.*, 1776, t. vi. This volume also contains a "memoir on the taxes raised in unforeseen cases ('affaires extraordinaires') in France during the war of 1756-1763." They amounted to no less than 1,105,227,761 livres.

The free-trade movement is represented by a memoir written by M. Belly on the decline of the trade of Leghorn in consequence of the number of charges (1775, t. vi.); the same author contributes an essay on the state of commerce and manufactures in Italy (t. vii.) The obstacles to the shipping trade in the Rhone (1775, t. ix., t. xi.), and to the exportation of iron (1776, t. iv.), are complained of, and a petition of the Guyenne chamber of commerce for free trade to the East Indies is published (1776, t. iv.).

Among the events favourable to the economists the following are worth mention:—The correspondence of King Gustavus of Sweden (when a youth) with Count Tessein and Scheffer, published by Col. St. Maurice de St. Leu (1775, t. iv., 1776, t. ii.); the foundation of a "Société d'émulation" in Paris after the model of the London "Society for encouraging arts and manufactures," the rules of which are contained in 1775, t. ix. The economic reforms introduced in Tuscany by the Grand-duke Leopold, and enumerated in *Saggi di Agricoltura; di un Paroco Siamminiatese*, Florence 1775, are favourably reported on. Among these the erection of a kind of co-operative store at Florence for the sale of all sorts of goods deserves mention; upon the abolition of corporations it was imitated at Paris by the Bureau de Correspondance Générale, March 1776 (*N. Éph.* 1776, t. iii. p. 177). The publication of *Ephemeriden der Menschheit* by Isaac Iselin at Basel is chronicled with enthusiasm by Baudeau.

The literary movement is represented by a lengthy criticism of Necker's book, *Sur le Commerce et la Législation des Grains*. It marks the distinct contrast between social protectionism and the spirit of individual property; the contrast between landed and moneyed "capitalism." (*Eclaircissements demandés à M. N——, au nom des Propriétaires Fonciers et des Cultivateurs français* 1775, t. v. 65-168, t. vii. 89-167, t. viii. 93-139, and Baudeau's letters to M. N. on his "Éloge de Colbert," held at the French academy in 1774, t. ix. pp. 44-106). A letter directed against the free-trade theory of the economists by the Count de Magnières (t. xii.) is refuted by M. de R——(?) in 1776, t. ii.—A review of the book of Condillac, *Sur le Commerce et le Gouvernement* (1776, t. iv. pp. 109-130, t. v. pp. 131-147), written by Baudeau, treats this author as a heretic from the orthodox school. "The true economists are easy to characterise by one feature which everybody understands. They recognise one master (the doctor Quesnay), one doctrine (that contained in the *Philosophie rurale* and the *Analyse Économique*), classical text-books (the *Physiocratie*), and technical terms . . . precisely like the old scholars of China" (p. iii.).

The *Nouvelles Éphémérides* ceased in June 1776, on the dismissal of Turgot from the ministry (12th May 1776), after which date the only organ of the physiocrats was the *Journal de l'Agriculture*, which Roubaud had reconstituted in 1775; but this periodical also came to an end in 1783. Baudeau made a last effort to re-establish his former review, for there are at the Bibliothèque Nationale at Paris three volumes of *Nouvelles Éphémérides économiques* of 1788 (Paris, Onfroi et Royer) extant. These contain attacks against Colbert and Necker, historical remarks on Sully; fundamental questions of economics, inquiries into the origin of taxation among the Greeks and Romans, and on the influence of morals on agriculture by the Marquis de P——(?).

In 1789 appeared *Éphémérides de l'Humanité ou bibliothèque raisonnée des sciences morales.* Tome premier (and last), aux dépens de la Société. This is probably the last utterance of this kind made by the Économistes, and is entirely written by A. F. J. Fréville. It begins with a lengthy exposition of their doctrines (pp. 1-68), contains articles on the principles of taxation (pp. 108-132), and their application to the Austro-Belgian provinces (pp. 337-394); others against Necker's theory of the circulation of riches, as enunciated in his book, *De l'administration des finances en France*, t. iii. ch. xxi. (pp. 284-336). The greater part of the volume deals, however, with political questions; it is filled up with polemics against the champions of absolutism, such as Count Windischgraetz (pp. 68-108, 133-158, 265-284), and with observations on the convocation of the *États généraux* (pp. 159-264). It closes with a philosophical letter on Montesquieu's *Esprit des lois* (pp. 395-400). Constitutional questions being at this time the most prominent ones, and economic problems standing more in the background, this publication ceased with its first volume. The *Journal d'Économie publique, de Morale et de Politique*, edited by Roederer and Morellet appeared August 1796.

The *Éphémérides* thus played an important part in the literary life of economics during the 18th century. As an example it may be mentioned that Lavoisier, in his introductory remarks to his statistics *De la Richesse territoriale du Royaume de France*, printed by order of the national assembly in 1791, and reprinted in 1797 in the *Journal d'Économie publique*, edited by Roederer, mentions Quesnay as having reached the same conclusions as himself, and notes the fact that Quesnay's statistics were the occasion of Voltaire's *L'Homme aux quarante écus.* The *Éphémérides* formed a scientific economic review written with a distinct practical tendency, namely, to struggle for free trade, free enterprise, and equal taxation; to combat the crushing burdens imposed by commercial restraints, industrial monopoly, arbitrary assessment, and lavish public expenditure. Being in the exclusive possession of a "school," they preserved, in spite of the variety of their contents, a systematic uniformity in method and policy. Besides exhibiting the first example of journalism made subservient to social science, they are the richest source for the history of contemporary economic life, and the growth of modern ideas, not only in France but even in eastern Europe.

Their immediate influence in France was rather short-lived, and after the outbreak of the Revolution they became so entirely forgotten as to enable the tale to be spread that they had been written in order to help Voltaire, Servan, and Bovier to establish a democratic revolution (Abbé Barruel, *Mémoires pour servir à l'histoire du Jacobinisme*, Londres 1797, 2nd pt. pp. 210-215). The interest, however, which the *Éphémérides* excited abroad was a far-reaching one; and by inducing monarchs, statesmen, and landlords to introduce agricultural and financial reforms, to alleviate feudal burdens and commercial restraints, they benefited even the lower classes in Sweden, Denmark, Baden, Austria, and Tuscany. Thus they helped towards transplanting economic progress eastwards both in thought and practice.

[An account of the origin of this review is given in the *Journal de l'Agriculture*, March 1766; in the *Éphémérides*, 1769, t. iv., v.; in the *Dictionnaire de l'Économie Politique*, under the heading "Éphémérides du Citoyen"; in the *Nouveau Dictionnaire d'Économie Politique* the information will be found under the heading "Baudeau." See also Loménie, *Les Mirabeau*, 1879, t. ii. p. 251. Levallois, *Rousseau, ses amis et ses ennemis*, 1865, t. ii. p. 385.—G. Schelle, *Du Pont de Nemours et l'école physiocratique*, 1888, pp. 43, 99, 125, 144, 211, 408. In Germany Mauvillon complained in 1775 of the want of a German economic review of the value of the *Éphémérides* (*Untersuchungen über die Natur und den Ursprung der Reichtümer und ihrer Vertheilung*, a translation of Turgot); only the next year they were imitated by Isaac Iselin, the editor of *Ephemeriden der Menschheit oder Bibliothek der Sittenlehre und der Politik*, Leipzig, 1776-1782. The only known complete set of the *Nouvelles Éphémérides* belongs to the Giessen University Library (pressmark B. 800),—the use of it was most liberally allowed to the writer of this article, in order to enable him to draw up the above statement.] S. B.

(See also BAUDEAU, DU PONT DE NEMOURS, PHYSIOCRATS, QUESNAY, and TURGOT.)

ÉPICES. The French judges down to the revolution were paid partly by salaries (*gages*), and partly by the payments of suitors (*épices*) The latter were originally voluntary presents in kind, and several of the early kings tried to limit their amount. But in the 15th century the *épices* gradually became compulsory and were paid in money. These payments for justice constituted a considerable indirect tax upon the people, and gave rise to many abuses. It was the interest of the judges to spin out cases so as to increase the charges upon suitors, and thus justice became dilatory as well as expensive. On several occasions the states-general, and even the parliament itself, petitioned for the increase of the judges' salaries, in order that the *épices* might be abolished or at least diminished. But the French treasury was never in a condition to adopt this very simple remedy, and the abuse of *épices* lasted till the constituent assembly abolished the old parliaments, and made justice gratuitous.

[Adam Smith, *Wealth of Nations*, bk. v. ch. ii. pt. 2.] R. L.

EQUALISATION OF INTERNATIONAL DEMAND. The equation of international demand is a particular case "of the more general

law of VALUE (*q.v.*) . . . called the equation of supply and demand," but presents some peculiarities which almost justify Mill (*Principles of Political Economy*, bk. iii. ch. 18, § 4), in describing it as "an *extension*" of that law. These are: the absence of (1) a single market—which allows the substitution of price for value in discussing domestic trade, and (2) of the regulator given by cost of production (see INTERNATIONAL TRADE). An analysis of the forces tending to bring about equilibrium of supply and demand, always important, is here essential.

On the simplest supposition—that of two countries trading in two commodities—each article is necessarily the price of the other, and the equation of reciprocal demand is the evident outcome of the bargaining on each side, carried to the point at which no additional advantage can be gained. When several commodities enter into foreign trade the equation is established in substantially the same way. Values are so arranged that the sum of exports is *equivalent* to that of imports, since, were it otherwise, readjustment of quantities, of values, or of both, would be necessary. In the actual complications of foreign trade carried on between many countries the law takes a somewhat different form. "It may be concisely stated as follows. The produce of a country exchanges for the produce of other countries at such values as are required, in order that the whole of her exports may exactly pay for the whole of her imports" (Mill, *Principles*, bk. iii. ch. 18, § 4). Though each country must export to an amount equal to what it imports, its trade with any one country may mainly or even exclusively be import or export, an excess on either side being compensated by a corresponding deficit in the trade with other countries.

The statement of the equation of international demand has to be further modified so as to include the effect of the various elements of *indebtedness*. All debts due to a country act like an effectual demand created by the same value of exports. The principal heads are: (1) interest on foreign loans or on capital invested abroad; (2) freightage for shipping services; (3) such items as (*a*) tribute due by foreign states; (*b*) earnings of citizens abroad; (*c*) expenditure of foreigners travelling in the country. Accordingly, the final result is that "the state of international demand which results in commercial equilibrium is realised when the reciprocal demand of trading countries produces such a relation of imports and exports amongst them as enables each country, by means of her exports, to discharge all her foreign liabilities" (Cairnes, *Leading Principles*, bk. iii. ch. 18, § 5). In the most complicated as in the simplest case, the force producing equilibrium is the action of self-interest, causing the supply of commodities for exchange at such terms as will afford the maximum advantage to the trading countries (see Giffen, *Essays in Finance*).

The mechanism of PRICE (*q.v.*) enables the complex adjustments of value which are requisite to be easily carried out (see INTERNATIONAL TRADE).

As to the difficult question whether the equation of international demand can be consciously altered to the advantage of one of the parties, see Mill, *Principles*, v. ch. iv. § 6; Cournot, *Principes Mathématiques de la Théorie des Richesses; Théorie des Richesses*, bk. iii. ch. iv.; Sidgwick, bk. iii. ch. v., who maintain that it can; also Torrens, the *Budget*. See *contra*, Jevons, *Theory*, pp. 157, 158.

[See references under INTERNATIONAL TRADE and INTERNATIONAL VALUE, more especially those to Mill, Cairnes, and Mangoldt.] C. F. B.

EQUALITY. The claim for equality may mean in politics (1) simply a claim for just and impartial administration of the laws; or (2) a claim that the laws themselves should not favour one class, still less one individual, at the expense of another; or (3) a claim for equal division of the comforts and discomforts of life. In the economic as distinguished from political doctrine, the claim of equality appears as the basis of the theory of free competition, and takes a form not precisely identical with any one of the three described. Economic reasoning, so far as it is quantitative, must assume a similarity of units. There might be a "free competition" within certain classes of the community only; and thus only the first kind of equality might be secured. An economic theory of the probable effects of such a competition would be perfectly possible. The most striking modern instance is perhaps the industrial system of the southern states of America before the emancipation of the slaves. Where the laws were clearly defined and fairly carried out, the task of the deductive economist would be comparatively easy. He would need indeed to postulate that they were so, before he could draw his theoretical conclusions; and he would then be postulating equality in the first sense, impartial administration. There might also be a state of things in which legislation was professedly indifferent to the privileges of particular classes, and all men were left free so far as legal hindrances were concerned, to seek their fortunes in the same ways. Economic theory would assume in this case that there was equality not only in the first sense, but in the second; and this has been perhaps the commonest assumption of modern economists. It was made by Adam Smith with full consciousness of its utopian character; indeed he could not conceive the possibility of so close an approach to it as has now been made by free-trading England. The full attainment of it is, however, impossible in a community of human beings, so long as they are divided by physical, social, and other

causes, into classes respectively weaker and stronger. The effort of legislation has been to redress such inequality by means of special protection and assistance. The result, though for every other reason desirable, is unfavourable to economic theory, so far as it makes the assumption of legal equality, in the second as well as the first sense, farther removed from the reality. It is no doubt possible to conceive the patronage of the laws as simply an attempt to secure to every one that equality of *opportunities*, of which the reinforcement by the laws of the inequalities of wealth would deprive the poorer members of society. From this point of view an economic theory of free competition could be worked out for competing citizens, supposed equally strong and fit for the race for wealth. But the inequalities left out seem too great for the equality assumed. Even if we neglected other causes of difference, opportunities would never be perfectly equal till human beings were physically and intellectually identical one with another.

On the other hand the effort after an equality of opportunities seems to carry society a step nearer perfection than the effort after justice and legal equality in the senses described. The opportunities may be conceived to be not of making money but of developing the faculties and doing the best work for which a man has the capacities. In all the noblest of the founders of socialistic and communistic schemes, such as aimed at equality in the distribution of wealth, equality of opportunities for the development of human individuality has been the real aim, more or less clearly understood. [See also ARISTOCRACY, COMMUNISM, TAXATION (equality of burdens).]

[Sir Jas. Fitzjames Stephen, *Liberty, Equality, Fraternity*, ch. v. "Equality" (1873).—Bédollière (Émile), in Maurice Block's *Dictionnaire de la politique*, art. "Égalité."—A. Wagner, *Lehrbuch; Grundlegung* (1879), 2nd part, §§ 220 to 223, pp. 418-426.—F. Y. Edgeworth, *Mathematical Psychics* (1881), pp. 129, *seq.*—J. S. Mackenzie, *Social Philosophy* (1890), pp. 249, *seq.*] J. B.

EQUATION OF SUPPLY AND DEMAND. (See DEMAND.)

EQUILIBRIUM is discerned by Jevons (*Theory of Political Economy*, ch. iv.) to be a cardinal conception in the abstract science which he elsewhere calls the MECHANICS OF INDUSTRY (*q.v.*). So Professor Marshall, indicating in the preface to his *Principles of Economics* the leading ideas by which he was inspired, says, "the demand for a thing is a continuous function, of which the 'marginal' increment is in stable equilibrium balanced against the corresponding increment of its cost of production." Professor Marshall employs the term *equilibrium amount* as the amount of any commodity produced in a unit of time when the demand for and supply of that commodity are in equilibrium, and when there is therefore no tendency in the quantity produced in a particular time to increase or diminish. The term equilibrium price is similarly used to denote the price of the equilibrium amount in the same circumstances. M. G. D.

EQUITABLE ASSETS. Assets that could be made available for the payment of debts only through a decree or order of a court of equity. Such assets were always treated as a trust fund, and were therefore divided amongst creditors *pari passu* without any regard to the priority of one debt over another. The chief equitable assets are the proceeds arising from the sale of lands devised in trust to pay or charged with the payment of debts.

[Williams on *Executors and Administrators*, pt. iv. bk. i. ch. i., London, 1879.—*The Administration of Assets*, by A. S. Eddis, London, 1880.] J. E. C. M.

EQUITABLE ESTATE. An estate in land that formerly was recognised in a court of equity only. The principal equitable estates are the estate taken by a person entitled to the benefit of land given in trust, equities of redemption (see EQUITY OF REDEMPTION), and equitable charges.

[*Principles of Equity*, by E. H. T. Snell, London 1892.] J. E. C. M.

EQUITABLE EXECUTION. The method by which a judgment creditor obtains payment by the appointment of a receiver of the rents and profits of the lands of the debtor. At common law certain forms of property, such as the interest of a mortgagor in the mortgaged premises, or the right to an unascertained sum of money, could not be reached by any ordinary writ. When the creditor had exhausted every method of obtaining payment he could resort to the Court of Chancery, who would appoint a receiver. Now the High Court of Justice can appoint a receiver in all cases where it is just and convenient that such appointment should be made.

[*The Law of Execution*, by T. K. Anderson, London, 1889.] J. E. C. M.

EQUITABLE MORTGAGE. A contract for a mortgage that previous to the Judicature Acts could be enforced only in a court of equity. The most usual case in which it arises is where a person deposits the title deeds of property with a creditor as security for a debt. But a mortgage is also "equitable" if the subject matter is trust or equitable property, such as an equity of redemption, or where there is a written agreement to make a mortgage. The mortgagee in every case may either call on the mortgagor to make a legal mortgage or may take proceedings to enforce a foreclosure or a sale.

[*The Principles of Equity*, by E. H. T. Snell, London, 1892.] J. E. C. M.

EQUITABLE WASTE. Waste in the nature of acts of spoliation, that a court will restrain a tenant for life from committing, though his estate was granted to him with liberty to commit waste, such as pulling down the family mansion or cutting down ornamental timber.

[Goodeve, *Law of Real Property*, London, 1891.] J. E. C. M.

EQUITY is the name applied to a number of legal rules, which formerly were administered by the court of chancery. The chancellor was originally the king's secretary, and as such he had to advise the king in "matters of grace and favour"; viz. in matters in which the king's intercession was invoked for the sake of mitigating the strict rules of the common law. "When early in the reign of Edward III. the chancellor ceased to be a part of the king's personal retinue, and to follow the court, his tribunal acquired a more distinct and substantive character . . . ; petitions for grace and favour began to be addressed primarily to him, instead of being simply referred to him by the king, or passed on through his hands. In the twenty-second year of that king such transactions were recognised as the proper province of the chancellor, and from that time his separate and independent equitable jurisdiction began to grow into the possession of that powerful and complicated machinery which belongs to later history" (Stubbs's *Const. History*, ii. 269). One of the most important stages in that growth was reached when, in the reign of Richard II., the "writ of subpœna" was introduced, which enabled the chancellor to enforce obedience to his decrees by the threat of imprisonment. One of the most important matters which came under the chancellor's jurisdiction was the protection of the rights of persons possessed of "uses" in land. For several reasons it had become convenient to sever the legal ownership of land from the beneficial ownership, and with that object it became customary on a transfer of ownership to enfeoff one person "to the use" of another. The first-named person was called the "feoffee to the use," and he was the only person whom the ordinary courts recognised; but as he was in duty and conscience bound to allow the rights of beneficial ownership to the second-named person, known by the technical name of "cestui que use," the chancellor in the exercise of his equitable jurisdiction compelled him to do so, if he wished to take advantage of his formal right. The practice in matters of this nature developed into a regular system called "equity," to distinguish it from the "common law" administered by the other courts. That system was characterised—(1) by the recognition of rights which the other courts refused to enforce (so-called "equitable rights"); (2) by legal doctrines differing in substance from the doctrines of common law; (3) by a special procedure; (4) by special kinds of relief.

(1) The most conspicuous among equitable rights are the rights derived from trusts. Trusts are the modern successors of "uses," but are used on a much larger scale, and also in the case of personal property; the most familiar instances being the trusts created by wills and settlements, by which the control of certain land or certain funds is given to one or more persons for the benefit of another person or other persons. Another instance of an equitable right is the right of the mortgagor to redeem the mortgaged property, the legal right to which is vested in the mortgagee.

(2) Amongst doctrines specially belonging to the sphere of equity may be mentioned the rule that a debt may be assigned; that, in the absence of an express stipulation or necessary implication, time is not considered as of the essence of a contract, that penalties named in contracts cannot be enforced unless they partake of the nature of liquidated damages, etc.

(3) The administration of trusts and of the estates of deceased persons involves protracted inquiries and the taking of accounts, etc.; for this purpose a special procedure and a special machinery has been developed in the courts of equity, which were the only courts which had to deal with matters of this nature.

(4) Among the special kinds of relief which could be obtained with the assistance of the courts of equity, the right to claim specific performance of contracts for the sale of land, and the right to claim injunctions, *i.e.* orders restraining the opposite party from doing certain acts injuring the rights of the plaintiff, are the most important. The courts of equity, in granting relief of this kind, were supplying a material defect in the administration of justice, as in the courts of common law; the only remedy in the case of breach of contract or injurious acts consisted in pecuniary damages, which in many cases did not adequately compensate the injured party. The power of the courts of equity to enforce their decrees by the imprisonment of disobedient parties materially helped them in the exercise of this jurisdiction.

The Judicature Act of 1873 has merged the equity courts and the courts of common law into one high court, and the rules of equity are now administered in all courts; but as they are derived from a different source from the common law rules, and have always been treated as a separate system, the distinction is still kept up, though it has no longer any practical meaning. The matters which are specially fitted for the procedure of the chancery court, have, however, been assigned to a special chancery division which is organised in a manner appropriate to the proceedings required with regard to them.

[Spence, *Equitable Jurisdiction.*—H. A. Smith,

Principles of Equity. For the place of equity in systems of law generally, and its importance in the evolution of society, see Maine, *Ancient Law*.] E. S.

EQUITY OF REDEMPTION. The right that a mortgagor has to recover, on payment of principal, interest, and costs, a mortgaged estate which has under the mortgage deed become the property of the mortgagee owing to the failure of the mortgagor to pay the principal and interest at the time agreed on. The right resembles real estate inasmuch as it will descend to the mortgagor's heirs. It is alienable, and may itself be mortgaged.

[*The Principles of Equity*, by E. H. T. Snell, London, 1892.] J. E. C. M.

EQUITY TO A SETTLEMENT. When a husband had to resort to a court of equity in order to reduce into possession property of his wife, the court compelled him to make a settlement of a portion, usually one half, of such property on the wife and children.

[*The Principles of Equity*, by E. H. T. Snell, London, 1892.] J. E. C. M.

ERROR EXCEPTED. These words are frequently inserted at the end of a statement of account, and are intended to show that the accounting party wishes to reserve the right to make further claims in case any error should subsequently be discovered in the account.

E. S.

ERROR, Law of.* When an average of a set of statistics is taken, the deviation of any one of them from the average is sometimes called an *error;* and the arrangement of the group about its mean, a *law of error*. A particular arrangement, which under certain frequently-realised conditions arises, is designated as *the* law of error. According to this law the figure which is likely to occur most frequently is the one which forms the average; the others are grouped symmetrically above and below the average; becoming less frequent as they are more distant from that central magnitude. In the exact language of symbols, if x_1, x_2, etc., are the quantities averaged, and X the average, the number of quantities comprised between x and a neighbouring value $x+\Delta x$ is approximately $= n\Delta x \frac{1}{\sqrt{\pi c}} e^{\frac{(X-x)^2}{c^2}}$; where π and e are the well-known constants 3·1415 . . ., 2·718 . . .; and c is a constant proper to the group under consideration. This arrangement is represented by the curve $Y = \frac{n}{\sqrt{\pi c}} e^{-\frac{(X-x)^2}{c^2}}$; the number of observations in the neighbourhood of any point in the axis of x being proportioned to the ordinate at that point; and the number of observations comprised between two values of x being equal to the area intercepted by the ordinates at those two points, the curve, and the axis x. Two illustrations of this curve are given in the annexed diagrams. The curve is spread out, as in Fig. 1, when the constant c is

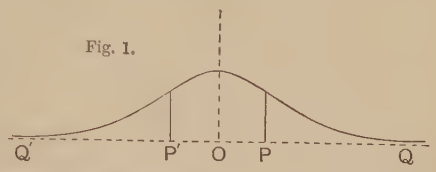


Fig. 1.

large; it is gathered in, as in Fig. 2, when the

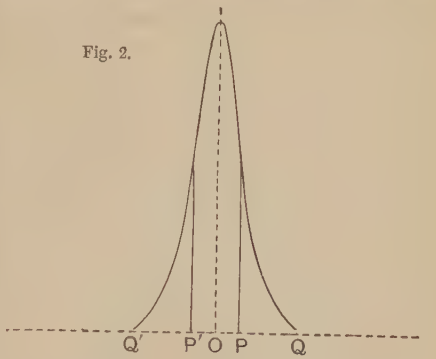


Fig. 2.

constant c is small. The constant c being ascertained for any group of statistics, we are able to predict what proportion of the group will probably be comprised between limits defined in terms of that constant. Thus half of the group is likely to be comprised between the limits X − ·4769 . . . c and X + ·4769 . . . c; or, in other words, it is as likely as not that an observation taken at random will be distant from the average X by an interval greater than ·4769 . . . c; which multiple of c is accordingly called the *probable error*. Again the greater part of the group is comprised between the limits X − 2c, X + 2c; the odds are more than 200 to 1 against any observation being at a distance greater than 2c from the average. The odds are 50,000 to 1 against the distance of any observation from the average being greater than 3c. The points P and Q (P′ and Q′) in the figures are intended to represent the "probable" and what may be called the *improbable error* (2c or more).

The condition under which the law of error is fulfilled is that each of the things averaged is dependent in the same way upon (the same function of) a great number of independently variable elements. For example add together ten or more digits obtained thus: the first is the *first* decimal place in any constant, *e.g.* π, the second addendum is the first digit in any other constant, *e.g.* e, and the remaining eight constituents of the sum are the *first* digits in almost any other unconnected constants. Form another

sum of ten digits by taking the *second* decimal place in each of the ten constants; and so on. The set of sums thus formed will group themselves according to the law of error; the average being 45, and the constant c being $\sqrt{165}=13$ nearly. About half the group will be found between $45-6$ (*i.e.* 39) and $45+6$ (*i.e.* 51) since $\cdot 477\sqrt{165}=6$ nearly. A very small proportion of the group—less than a two-hundredth part—may be expected to occur outside the limits 45 ± 26. ($26=2\times\sqrt{165}$ nearly). If the number of elements entering into each of the figures averaged had been greater than ten, *e.g.* twenty, the "probable" and the "improbable" error would have been greater *absolutely*, namely 10 and 36 respectively; but less *relatively* to the average, now 90. Similar consequences would follow if, instead of a simple *sum*, we had employed almost *any function*.

There is reason to believe that the condition which has been indicated is frequently fulfilled; and the law of error has been observed to prevail in extensive classes of phenomena, which may thus be summarised:—

1. Repeated observations of one and the same physical quantity.

2. Shots fired at the same object.

3. A series of numbers each of which is obtained by taking at random a batch of say n balls out of a bag containing white and black balls mixed up in a certain proportion, and noting the number of whites in each batch of n balls; or a series obtained by tossing coins or dies and noting the number of heads or aces; and similar series.

4. Measurements of the organs of numerous specimens of a natural species.

5. Statistics of social phenomena which do not present a *progressive* character, *e.g.* the number of births, deaths, or marriages or the *rates* of the same, or the ratios between the male and female rates; observed at places or times not materially distant from each other.

Illustrations of the third and fifth classes are given in the accompanying tables, the materials of which have been taken from Professor Westergaard's *Theorie der Statistik*. In Table I., column 1, was obtained from 100 batches of balls; each batch numbering 100 balls, which were taken at random from a bag containing black and white balls in equal proportions; the number of white balls in each batch having been noted, the number of these numbers comprised between two limits, which are defined by a multiple of the constant c, forms an entry in column 2. The corresponding limits are given in column 1. Thus twenty-five of the observations occurred between the limits $50-\cdot 3\frac{c}{\sqrt{2}}$ and $50+\cdot 3\frac{c}{\sqrt{2}}$, or 47 and 53, since the value of c is here $\sqrt{2}\times 10$; 40 of the errors occurred between $50-\cdot 5\frac{c}{\sqrt{2}}$ and $50+\cdot 5\frac{c}{\sqrt{2}}$, or 45 and 55; and so on. Column 3 similarly registers the arrangement of the statistics obtained from 750 batches of lottery tickets—each batch numbering 100—by noting the number of prizes in each batch (the average being 16, and the constant c being 5 nearly).

Table I.

Table showing the correspondence between fact and theory in the arrangement of the numbers of white balls in batches of 100 balls each drawn at random from a bag; and of prizes in batches of 100 tickets drawn at a lottery.[1]

Limits above and below the average.	Percentage of errors within limits.		
	Observed.		Calculated.
	Balls drawn from bag.	Tickets drawn at lottery.	
1	2	3	4
$\cdot 3\frac{c}{\sqrt{2}}$	25	23	*23*
·5 ,,	40	36	*36*
·7 ,,	50	48	*49*
1·1 ,,	70	67	*69*
1·5 ,,	85	83	*82*
2·1 ,,	95	95	*93*

These results of observation are to be compared with the predictions of theory which are contained in column 4.

Table II.

Table showing the correspondence between fact and theory in the proportion of male to all births for nineteen years in Italy.[2]

Limits above and below the average.	Number of errors within limits.	
	Observed.	Calculated.
1	2	3
$\cdot 3\frac{c}{\sqrt{2}}$	2	*5*
·5 ,,	7	*7*
·7 ,,	9	*9*
1·1 ,,	12	*12*
1·5 ,,	16	*14*
2·1 ,,	17	*16*

[1] Westergaard, *op. cit.* p. 67.

[2] See Westergaard, *op. cit.* p. 39. The first column differs from his only in notation; the second column is the same as his; the third column is calculated from the second column of his table at p. 67.

In Table II., the first column gives limits defined by the constant c as before; the second column gives the arrangement of errors obtained by comparing the proportion of male births to all births, male and female, in Italy for each of nineteen years with the average proportion for the whole period; the third column gives the theoretical arrangement.

The applications of the law of error with which we are here concerned relate partly (I.) to practice, and partly (II.) to the investigation of causes.

(I.) It is useful, when employing an average obtained from statistics, *e.g.* a death-rate, or an index-number, to have the means of estimating the extent to which the figure in the case with which we are dealing is likely to differ from the average obtained in past experience. It is useless to calculate the average to a number of decimal places not warranted by the "probable error" to which the figure is liable.

(II.) Under the second head two cases may be distinguished: (a) where the analogy of simple games of chance holds good; the constant c being that which would be obtained if the statistics were of the sort which forms our *third* class of phenomena above; and (b) where the constant is not such.

(a) In the first case we have the advantage of knowing that the given group cannot be broken up into two, or more, with widely different averages; that the analysis which is a principal object of the scientific statistician has been already pushed almost up to its limit. Our statistics cannot be like batches of balls taken from bags in which the proportion of white to black is very different; but rather are analogous to the successive numbers of white balls occurring in batches of the same size taken at random from the same bag. It would appear hopeless therefore to trace by ordinary induction the causation of any particular event of this character. It is only crazy gamblers who pretend to predict the "runs" in games of pure chance. But we are not precluded from applying the law of error to detect delicate differences, such as may exist between a perfect and a slightly-loaded coin. Take for example the observation that the percentage of male compared with female births for more than a million *plural* births (of twins or triplets) in Prussia during a certain period of years was 104·447 (males to 100 females); whereas the corresponding ratio for all births (single as well as plural) was 106·305; the observation on which this average is based numbering several millions. Given these numbers, and knowing as we do that the phenomenon belongs to class (a), we are able to determine the constant c; which proves to be nearly ·3. Thus the difference between the two averages compared, viz. 1·858, is about six times the constant, and accordingly (see above par. 1) the odds against the observed difference in the averages being due to accident and not to a real cause which may be expected to continue acting—are many times more than 50,000 to 1 (Duesing). We have obtained, at a stroke, a degree of evidence in favour of a law which otherwise could only be obtained by a laborious analysis of the returns. By parity of reasoning it is found that in times and places where the absolute number of births is large the proportion of males is small (*ibid.*).

(b) This summary method may be employed also in the second case (where the analogy with games of chance does not hold good); but not in such a clear light of foreknowledge as to the character of the causes under investigation.

Besides the exact and direct applications of the law of error, it also affords what may be called "regulative ideas" to the statistician; supplying the *rationale* of many received maxims: that *ceteris paribus* an average is more worth the greater the number, and the less the divergence, of the returns averaged; that a few accurate returns may be better than many loose ones.

[For a general exposition, at once simple and accurate, of the law of error, see Venn, *Logic of Chance*, third ed. 1888, chaps. xviii. and xix. See also Jevons, *Principles of Science*, chap. xvii.—Bertillon, art. "Moyenne," *Dictionnaire Encyclopédique des Sciences Médicales.*—Quetelet, *Physique Sociale.* For the conditions under which the fulfilment of the law may be expected, Glaisher, *Memoirs of the Astronomical Society*, vol. xl. p. 104.—Galton, *Philosophical Magazine*, 1875, "Statistics by inter-comparison."—Edgeworth, *ibid.* 1892, "The Law of Error."—For the *a posteriori* proof, that the law is fulfilled, see Galton, *Natural Inheritance.*—Westergaard, *Grundzüge der Theorie der Statistik*, chap. iii.—Edgeworth, "Empirical proof of the law of Error," *Phil. Mag.*, 1887.—For the application of the law to practice, Dormoy, *Théorie mathématique des assurances sur la vie.* For the application of the law to induction, (a) where the analogy of games of chance holds good, Westergaard, *op. cit.*—Lexis, *Massenerscheinungen.* — Duesing, *Das Geschlechtsverhältniss in Preussen*; (b) in general, Edgeworth, *Journal of the Statistical Society*, Jubilee Volume, 1885, "Methods of Statistics," *ibid.* December 1885, "Methods of Determining Rates." Many of these writers throw light on other parts of the subject besides those with special reference to which they have been cited. Several other authors might have been cited. Merriman has published an immense list of writers on the cognate subject of the *Method of Least Squares*, many of whom have touched on the *law of error*, and some on its applications to social phenomena (see PROBABILITIES; STATISTICS).] F. Y. E.

ESCHEAT (historical) was a feudal term introduced by the Normans into England, and applied to the reversion of land to the lord. The ordinary cause of such reversion was the failure of heirs, when the whole estate passed into the hands of the lord. If the heir was a

minor, the phrase was *escæta cum hærede*, when the necessities of the heir and other children were paid for out of the estate and the surplus only went to the lord, until the heir, on reaching his majority, paid a relief and obtained seisin. Escheat also took place in cases of treason or felony. If the criminal was a tenant-in-chief, the whole of his property reverted to the crown; but if he was a sub-tenant, his movables only fell to the crown, while the real estate passed to the immediate lord.

[*Dialogus de Scaccario*, ii. x.] R. L.

ESCHEAT (MODERN LAW), takes place where a person dies intestate and without an heir. The lands of such a person go to the feudal lord, but, as in the case of freehold land the right of mesne lords can in our days be established but rarely, such land generally goes to the sovereign as lord paramount. Copyhold land goes to the lord of the manor, and § 4 of the Copyhold Act provides that the right of escheat is to continue after enfranchisement; enfranchised copyhold land, though otherwise of the nature of freehold land, does not therefore escheat to the crown, but goes to a private person. Formerly the lands of felons were subject to the right of escheat, but an act passed in 1870 has repealed this rule. On the other hand the Intestate Estates Act of 1884 has made certain rights as to real property subject to escheat, which were not so subject before. The same act has enabled the crown to waive its right in certain cases. The procedure which takes place to inquire as to the right of the crown has been simplified by the Escheat (Procedure) Act of 1887.

The right of the state to acquire the property of a person dying without relations or a will exists in most countries independently of feudal rules, and seems justified by reason and convenience.

[Bentham, J. S. Mill, Godin, and other reformers, have proposed to narrow the rights of intestate succession (*i.e.* to extend escheat) in order to correct, to some extent, the unequal distribution of wealth.] E. S.

ESCUDO. The name of the Spanish half dollar.

Gold and Silver Coins as follows:

Metal.	Denomination of Coin.	Fineness.	Weight.	Value. In gold 916·6 fine at £3:17:10½ an ounce.	Value. In gold francs, 900 fine.
			grains.	£ s. d.	francs.
Gold	10 Escudos (or Doubloon)	900	129·44	1 0 7½	26·0
	4 Escudos	900	51·78	0 8 3	10·4
	2 Escudos (or Dollar)	900	25·89	0 4 1½	5·2

Metal.	Denomination of Coin.	Fineness.	Weight.	Value. In silver 925 fine at 5/6 an oz.	Value. In silver francs, 900 fine.
			grains.	s. d.	francs.
Silver	Escudo (or ½ Duro or Dollar)	900	200·30	2 2¾	2·6

These coins have not been struck for circulation in Spain since 1868, when the system of pesetas (francs) was introduced. Similar coins, including a doubloon of eight escudos, are current in the Philippine Islands (see DOUBLOON).

F. E. A.

ESCUSADO, the name of the portion of ecclesiastical tithes made over in 1567 by the Pope to the crown of Spain. E. Ca.

ESSART, EXART, sometimes also called ASSART. A mediæval term applied to a portion of forest land cleared and brought into cultivation. To make essarts was technically a breach of the forest law, punishable by fine. These fines, with the yearly rents levied on the essarted lands, which the maker of the essart was usually allowed to keep under cultivation, formed a considerable item in the revenues of the royal and other lords of forests in mediæval England. These rents would appear to have been fixed at the highest rate that could be maintained, a rate which will be found to be often several times as great as that paid by free or even customary tenants for other land in the same neighbourhood. In spite of these high rates, however, fresh essarts were made almost every year in England. The forest of Wirrall in Cheshire, for instance, was entirely under cultivation before the death of the Black Prince, who, in his capacity of Earl of Chester, by a formal charter of disafforestment, put his seal to the work of reclamation. The word *essart* has been variously derived from the old French *assortir*, to make smooth, or one of the low Latin terms, *exertum*, rooted up, *sarrire*, to weed, or *exarare*, to plough up.

[Manwood, *Forest Law*, London, 1596, etc.—Ducange, *Glossarium Mediæ et Infimæ Latinitatis*, ed. nova a L. Favre, Paris, 1884.—Forest accounts among the ancient records of the exchequer in the Public Record Office.] A. H.

ESTATE. A so-called owner of land has, according to English law, no absolute right of ownership; all that he has is an interest varying in extent and duration, and known in technical language as an "estate" in the land. The largest estate known to the law is an "estate in fee" (fee simple), which gives the owner as complete rights of enjoyment and alienation as the nature of the property will admit; an estate tail (see ENTAIL), being convertible into an estate in fee—by the tenant alone, if in

possession, and otherwise by him jointly with the tenant for life—confers rights nearly as complete. An estate for the life of the tenant, or for the life or lives of another person or other persons, gives the tenant the privileges of ownership during his life or during the life or lives of such other person or persons; but a tenant for life—unless the estate is conferred upon him "without impeachment of waste"—is not allowed to pull down buildings, cut timber, or open mines. An estate for the life of another person is called an "estate pur autre vie." Estates in fee or in tail, and estates for life, are called "freehold" estates, estates for a definite number of years, however large the number may be, are "leasehold," also called "less than freehold" (see LEASEHOLD PROPERTY). The word estate is also used as a comprehensive name for the assets of a bankrupt or of a deceased person. In the latter case a distinction is made between freehold land and houses (real estate) and other property (personal estate).

E. S.

ESTATE DUTY. See DEATH DUTIES.

ESTCOURT, THOMAS (end of 18th and early 19th century). Thomas Estcourt sat in parliament as member for Cricklade from 1784 to 1806. In 1804 he published *An account of an Effort to Better the Condition of the Poor in a Country Village* (*Long Newton*) *and some Regulations suggested by which the same might be extended to other parishes of a similar description*. The work was printed by the board of agriculture. Estcourt states that in 1800 arrangements were made for letting to any cottager a small quantity of land at a rent of £1 : 12s. an acre, the land to be forfeited if not properly cultivated, or on the receipt of parish relief other than medical. He states that the offer was largely accepted, and that the scheme greatly decreased the poor-rate in the village.

C. G. C.

ESTERNO, PHIL., COMTE D' (1805-1883), born at Dijon, died at Paris. Esterno's life was mainly devoted to agriculture and to political economy. The first work of his which caused him to be known as an economist was entitled, *Des banques départementales en France*, 1 vol. in 8vo, 1838. In this Esterno argued in favour of departmental banks, to be established in a good many towns, and at Dijon in particular. This was at a time when the government, urged on by a spirit of centralisation, were hostile to institutions of this description

In 1840 Esterno took part in a discussion instituted by the Academy of Moral and Political Sciences, on the signs and causes of poverty in different countries. BURET (*q.v.*) won the prize. Esterno's paper was rejected because, according to the report, "it was not an economic essay which was wanted." This work, printed in 1842, under the title of *La misère, de ses causes, de ses effets*, in 8vo, reflected the ideas of Malthus, while Buret, on the other hand, had allowed sentiment to overpower reason.

During the same year (1842) Esterno assisted as secretary, in conjunction with P. Rossi, who was president, in founding at Paris a society for promoting political economy (*Société d'économie politique*), an association which only lasted a few months, but was a forerunner of the society now known under the same name.

In 1867-68 Esterno published another work, *Des privilégiés de l'ancien régime en France et des privilégiés du nouveau*, 2 vols. in 8vo. In this work the author argued, in a brisk and original style, in favour of agriculture, which was put too much on one side by the privileged persons under the new regime, the moneyed classes, as distinguished from the landed proprietors, notwithstanding the untrustworthy titles of some of their institutions, *Le Crédit agricole*, for example. Before this date (1867-1868), and later on, Esterno strove, on behalf of the agricultural interest, against those artificial monopolies which, even to this day, have arrested the development of agriculture in France. He thus became deeply interested in works of irrigation, and it is to him and to his energy, though he never allowed his name to appear, that the adoption of the regulations of 29th April 1845 and 11th July 1847 (*lois d'Angeville*) is due.

Esterno's mental activity led him to occupy himself with other subjects with which we are not concerned here. His intelligence, his energy, and his scientific devotion enabled him to render them interesting to others. He was a vice-president of the second *Société d'économie politique*.

A. C. f.

ESTIMO. The revenue of Florence in the flourishing days of the republic was mainly derived from indirect taxes, which produced some 300,000 florins a year. But in times of war, which became frequent in the 14th century, this income was insufficient, and it was supplemented either by direct taxes or by compulsory loans (*prestanze*). Both taxes and loans were supposed to be based upon an *estimo*, or government valuation of property, and hence the term *estimo* comes to be applied to the exactions themselves. The earliest *estimo* was formed in 1288, and seems to have referred only to real property. Another assessment took place in 1327, when a foreign judge was appointed to determine the wealth of each individual by the secret testimony of seven of his neighbours. But the attempt to provide a regular basis for direct taxation proved a failure in the 14th century. An *estimo* soon became obsolete as property rapidly changed hands, and a charge upon real property alone pressed heavily upon the noble families and the peasants of the country, while the wealthy burghers escaped

For the most part the forced loans were arbitrarily assessed by the existing government, and one great reason for the Florentine greed for office, which introduced the system of lot, was the desire to escape taxation. When the CIOMPI (*q.v.*) rose in revolt in 1378, one of their demands was that no loan should be levied without an *estimo*, but their subsequent defeat prevented any change being made. The discontent excited by arbitrary and unfair assessment forced the government in 1427 to introduce the CATASTO (*q.v.*), which was only a new name for a thorough *estimo* of real and personal property including income. But this great reform was abandoned by Cosimo de Medici in 1441, when the old arbitrary assessments, formerly maintained to favour the wealthy burghers, were revived to relieve and conciliate the poorer classes. The Medici from this time introduced the principle of progressive taxation, and, as Guicciardini says, used the taxes instead of the dagger to ruin their opponents.

[Canestrini, *La Scienza e l'Arte di Stato desunta dagli Atti officiali della Repubblica Fiorentina e dei Medici* (only one volume of this great work was published).—Napier, *Florentine History*, vol. iii. p. 117.—Perrens, *Histoire de Florence.*] R. L.

ESTOPPEL. A term used in connection with the rule of law, according to which a person who, by statements or conduct, causes another person to believe in the truth of a certain matter of fact, with the intention of inducing him to act upon it, cannot, in any dispute concerning the matter in question, be allowed to assert that the state of things which he represented to be in existence, did not, in fact, exist; thus, for instance, a person, by accepting a bill of exchange, induces the holders to assume that the drawer was of full age, and otherwise capable to draw a bill, and he is therefore "estopped" from denying the drawer's capacity (Bill of Exchange Act, § 54 [2]). Estoppel by conduct is in certain cases also called "estoppel by negligence," *e.g.* if a person by the careless filling in of a cheque enables a fraudulent holder to alter the amount, he is estopped from denying that he drew the cheque for the full amount, as by his negligence he has allowed the banker to think that he has done so. Estoppel by statement or conduct is in the older law books called "estoppel by matter in pais," and distinguished from "estoppel by deed" and "estoppel by record." "Estoppel by deed" prevents a party to a deed from denying any fact mentioned in the same by way of recital or otherwise. "Estoppel by record" precludes a party to an action, or his successor in title, from denying any fact established by the decision in the action. The fullest statement on the law of estoppel is contained in the notes to the Duchess of Kingston's case in Smith's *Leading Cases*, vol. ii. E. S.

ESTOVERS (derived from the same root as the old French word *estovoir* = to be necessary), also called "Bote," is the right of a tenant for life, unless restrained by agreement, to take the necessary wood from the estate for the use or furniture of a house or farm. "Common of Estovers" is the right of a commoner to cut wood (see COMMONS). E. S.

ÉTATS GÉNÉRAUX, THE, or States General of France, were, under the old monarchy, the national representative assembly of the kingdom, composed of elected members of the three orders, the noblesse, the clergy, and the third order or state (*Tiers État* or *bourgeoisie*), but no fixed rule was ever followed for their election and assembling. Their first authentic meeting was summoned, 1302, by King Philippe le Bel, to assist him in his struggle against Pope Bonifacius VIII.; after this date they were convoked at irregular and often very protracted intervals, whenever the royal finances were in a state of extreme distress. In 1357, during the captivity of King John in England, they vainly tried to give a constitution to the kingdom. The *Etats Généraux*, which must not be confounded with the *Assemblées des Notables*, were at all times steady and consistent upholders of the theory that no tax could be valid without their assent; the monarchy never contested this doctrine, but never followed it in practice. The *États Généraux* of 1614 were the last before the revolution of 1789.

[Toussaint Quinet, *Recueil des États tenus en France*, 1651, 1 vol.—Paulin, *Grandes chroniques de France* (vol. vi. 1350-1382, Paris, 1838).—Jean Masselin, *Journal des États Généraux de 1484* (in Latin, translated into French by Bernier in 1835).—Rathery, *Histoire des États Généraux en France* (1845).—Bouillée, *Histoire complète des États Généraux et autres assemblées représentatives de 1302 à 1626* (Paris, 1845, 2 vols.).—Augustin Thierry, *Histoire du Tiers État.*—The most recent works are M. Jallifier's *Histoire des États Généraux* (1 vol. Paris, 1888), and M. Georges Picot's exhaustive *Histoire des États Généraux considérés au point de vue de leur influence sur le gouvernement de la France* (1355-1614).] E. Ca.

ETHEL. See ALOD.

EVANS, DAVID MORIER (1819-1874), was born in Wales. He treated economic subjects from a journalistic point of view, aiming rather at giving an accurate narrative of the successive phases of economic crises and the like than at tracing their hidden causes. In his own words he was a man of "facts and figures."

Besides numerous contributions to the *Bankers' Magazine*, which he edited for some years, the *Bullionist*, and the *Stock Exchange Gazette*, Evans wrote *The Commercial Crisis, 1847-48*, London, 1848-49.—*The Annual Commercial Register*, London, 1850.—*Fortune's Epitome of the Public Funds*, London, 1851-56.—*Facts, Failures, and Frauds*, London, 1859.—*The History of the Commercial Crisis, 1857-58, and of the Stock Exchange*

Panic, 1859, London, 1859.—*Notes on Speculation*, London, 1864.

[See *Dictionary of National Biography*, London, 1888, *Times* for 2nd January 1874.] A. H.

EVANS, THOMAS (end of 18th and early 19th century). In 1798 Thomas Evans was acting as secretary to the London Corresponding Society, and was imprisoned for nearly three years on a charge of treasonable practices. He afterwards acted as librarian to the Spencean Society, and published the work whose title is given below. The book contains the usual Spencean doctrines, advocates the nationalisation of the land as the only remedy for the prevailing distress, and denounces Malthus as the "hireling of pagan landlords."

Christian Policy, the Salvation of this Empire, "being a clear and concise examination into the causes that have produced the impending national bankruptcy, and the effects that must ensue unless averted by the adoption of the only real and desirable remedy" (2nd ed., 1816).

C. G. C.

EVELYN, JOHN, F.R.S. (1620-1706), the author of the famous *Diary*, published several works of economic interest. Amongst these may be mentioned (1) *Sylva, or a Discourse of Forest Trees and the Propagation of Timber*, etc., London, 1664, fol., 5th ed. 1729. A new edition with notes by A. Hunter was published in 1776; 4th ed. 1812. (2) *Navigation and Commerce, their Origin and Progress. Containing a Succinct Account of Trafficke in General: its Benefits*, etc., London, 1674, 8vo. (3) *Terra: A Philosophical Discourse of Earth, Relating to the Culture and Improvement of it for Vegetation, and the Propagation of Plants*, etc., London, 1676. New edition, with notes by A. Hunter, 1778. (4) *Numismata: A Discourse of Medals, Ancient and Modern*, etc., London, 1697, fol. Evelyn also translated several French works on horticulture.

[M'Culloch's *Literature of Pol. Econ.*, 146, 212. For a full account of Evelyn's life and writings see *Dictionary of National Biography*.]

W. A. S. H.

EVELYN, JOHN (*fl.* 1830), of Edgbaston, Birmingham, was the author of *Co-operation: An Address to the Labouring Classes on the Plans to be pursued in Conducting Trading Unions*, 1830, 8vo. By "trading unions" Evelyn meant co-operative societies.

[*Brit. Mus. Cat.*] W. A. S. H.

EVERETT, ALEXANDER HILL (1792-1847), was born at Boston, Massachusetts. He graduated with the highest honours at Harvard; engaged in the diplomatic service, and from 1825 to 1829 served as U.S. minister to Spain; returned to Boston and became editor and proprietor of the *North American Review*; from 1830 to 1835 was in the Massachusetts Legislature; in 1840 undertook a diplomatic mission to Cuba; and in 1847 was engaged in a similar errand in China, when he died at Macao. His writings cover a wide range in history and literature. Of economic interest is the following: *New Ideas on Population with Remarks upon the Theories of Malthus and Godwin*, Boston, 1823, pp. 125 (translated into French). In opposition to the Malthusian theory Everett argues that an increase of population is a cause of abundance and not of scarcity, since it develops the new elements of skill by which the same quantity of labour is applied with greater effect. Although the population of Great Britain doubled in the 18th century, improvements in the mode of applying labour increased its productiveness probably a thousand times. Everett, by travel and intercourse with eminent men in Europe, enjoyed opportunities possessed by few of the earlier American writers on economic subjects. He had an interview with Malthus, carefully discussing the points at issue. The latter suggested to Everett that his views were similar to those of Mr. S. Gray in the *Happiness of States* (1815). The Malthusian theory was also discussed in a correspondence between Everett and Prof. George Tucker in the *Democratic Review*, vol. xvii. pp. 297-310, 379-391, 438-444, and vol. xxi. pp. 397-410.

[For a summary of Everett's views, *v. Dem. Rev.*, vol. x. p. 466, where there is a sketch of his life until 1840. To the *North American Review* he contributed many essays, among them "M'Culloch's Political Economy" (1827), xxv., 112; "Political Economy" (1829), xxviii., 368; "British Opinions on the Protecting System," xxx., 160; "American System," xxxii., 127; "Phillip's Manual of Political Economy," xxxii., 215; "The Laws of Population and Wages," xxxix., 68; "Rae's Political Economy," xl. 122. Everett was a protectionist; and in 1833, as chairman of a committee at the Tariff Convention in New York, prepared a memorial to Congress in reply to the memorial prepared by Gallatin for the Free Trade Convention at Philadelphia. He advocated reforms in the banking system in two articles on "The Currency" in *Boston Quarterly Review*, July 1839; January 1840.] D. R. D.

EVERETT, GEORGE (*fl.* 1693-1698), Shipwright, appears to have occupied some position of importance in the government dockyards. He was also employed by the commissioners of customs in the detection of smuggling. He published (1) *The Pathway to Peace and Profit; or, Truth in its Plain Dress*, etc., London, 1694, 8vo. (2) *Encouragement for Seamen and Mariners, in two parts*, etc., London, 1695, 4to. The first of these pamphlets embodies certain proposals, which Everett laid before the lords of the admiralty in February 1694, for securing greater economy and efficiency in the dockyards. If they were adopted he promised an annual saving of £100,000. The second pamphlet was directed against the abuses of the system of impressment for the sea service. His object appears to have been to devise a system which

should at the same time secure a constant supply of sailors for the royal navy and get rid of the expense to the government, and "injury to the subject," of the system then in vogue. Amongst his suggestions may be noticed the registration of all seamen and mariners, fixed pay days, abolition of the sale of all offices in the navy, and a strict application of the principle of promotion by merit, an additional allowance for seamen disabled in the public service, the payment to the family of the sailor of six months' wages for every nine months he should be at sea, etc. Everett's pamphlets are of no theoretical interest, but they throw much light on the conditions of labour in the dockyards and the sea service at the end of the 17th century.

[Watt's *Bibl. Brit.—Cat. of Treasury Papers*, xxxvi. 38; liv. 29.] W. A. S. H.

EVICTION. The recovery of possession of land whether by simple re-entry or by legal process is often termed eviction. Eviction is substantially the same as EJECTMENT. The term is rather popular than technical. F. C. M.

EVOLUTION. See DEVELOPMENT.

EX. ALL. A well-known phrase on the stock exchange, used to signify that a security quoted or dealt in conveys to the buyer no rights in the shape of dividends or drawings or issue of new stock or other contingent advantages. The word ex. is simply short for excluding (see EX. DIVIDEND, EX. DRAWING, EX. NEW). A. E.

EXAMPLES. Examples in economics, as elsewhere, are simply cases, real or fictitious, or partly both, supposed to embody a general principle. They may be classified as follows: (1) *Real but general*, as Ricardo's hunters (*Principles*, ch. i. § i.), and Ad. Smith's bricklayers, carpenters, and men of letters (*Wealth of Nations*, I. x.). The examples are taken from a known genus but not from known individuals. Where the genus is perfectly well known, no cavil is possible. Ad. Smith's illustration of division of labour could hardly have been improved by a reference to a particular pin-making establishment in a specified place. But, in exposition, the more concrete the genus the more telling the example; *e.g.* 'blacksmith' seems nearer life than 'workman.' (2) *Real and particular*, as in Cairnes's illustration of the theory of international trade from the Australian gold discoveries (see CAIRNES). Adam Smith, where he does not use the real and general, uses the real and particular, and falls back on fiction only for his similes (as "the highway," "the waggonway through the air," the "wings," and "the pond and the buckets," *W. of N.*, II. ii.), or his metaphors ("wheel of circulation," "channel of circulation.") Ricardo and his immediate followers have preferred, as a rule, (3) *Fictitious* examples. These may be illustrations of which the component elements are generically well known, as even the favourite "man on the desert island," but the combining of the elements is the work of the writer, and is more or less arbitrary, as De Quincey's "man with the musical box on Lake Superior," and Bastiat's "plank and plane." There is also a risk that the construction of the example may involve a begging of the question to be proved. "Suppose that there are but two nations in the world living side by side, with a population of one million souls in each" (Barbour, *Bimetallism*). "My object was to elucidate principles, and to do this I imagined strong cases that I might show the operation of those principles" (Ricardo, *Letters*). There is no necessary fallacy in this method of exposition any more than in illustrating the law of gravitation by the action of bodies *in vacuo*. Concrete cases must necessarily exemplify much more than one principle, and, even if they suggested a particular generalisation, they may perhaps not clearly illustrate it without a fictitious simplification. The lawfulness of such a method of exposition or, it may be, of proof is discussed elsewhere (see DEDUCTIVE METHOD). J. B.

EXCAMBION is the technical term used in Scotch law to designate the contract whereby one piece of land is exchanged for another. The persons effecting the exchange are known as excambers. Each party gives the other such a warranty of title that, if evicted from the land which he has received, he and his heirs can recover from the other party and his heirs the land which he originally gave. When lands burdened with debt are disponed in excambion, they are freed from that debt and are thenceforward burdened with the debts, if any, formerly affecting the land given in exchange. Tenants in tail have a statutory power of effecting such exchanges which now extends to one-fourth of the total value of the property entailed (see LAND).

[Bell's *Dictionary and Digest of the Law of Scotland*, edited by George Watson, Edinburgh, 1882, art. "Excambion," and the authorities therein cited.] F. C. M.

EXCHANGE.

Exchange, p. 758; Exchange, Value in, 759; Exchange, Value in (History of Theory), p. 762; Exchange, Usury (see Usury), p. 767; Exchange (as Bourse), p. 767; Exchange, Stock, p. 768; Exchange, Provincial Stock, p. 770; Exchange, Foreign, p. 770; Exchange, Foreign (Practical Working of), p. 772; Exchange between Holland and Dutch India, p. 773; Exchange between Great Britain and British India, p. 776; Exchange, Internal, p. 777; Exchange of Notes (Scotland), p. 778; Exchange Broker, p. 778; Exchanger, Royal, p. 778.

EXCHANGE, the voluntary giving of one commodity or service on condition of receiving another, is to a great extent the basis of the existing system of PRODUCTION and DISTRIBUTION (*q.v.*). If there were no exchanges, each article of separate property could be used only by its owner, and, excluding gifts, slaveholding, and

communistic arrangements, each man would have to subsist on what he could produce directly for himself, using his own and no one else's instruments of production. As things are, however, separate property is used in the main by those who are most capable of using it, whether they are its owners or not, and no one lives only on what he has himself produced but each lives on what has been produced by a vast number of other persons (see Adam Smith, *Wealth of Nations*, bk. i. ch. i. at end). This is the result of exchanges; owners of property allow others to use it because they can get commodities and services in exchange for the use of it, and men are able to devote themselves exclusively to one occupation because the products of that occupation can be exchanged for the products of other occupations. While production is thus largely dependent on exchanges, distribution, as the word is commonly understood, could not exist at all without them. The use of the word implies that the whole produce of all the workers is considered to be a joint or common produce which, after being produced, has to be divided or "distributed." If each man lived on his own patch of ground, using his own instruments, and receiving no help from any one either in commodities or services, each man's produce or income would obviously be quite distinct from that of every other person, and the conception of a joint produce requiring to be distributed would never have been formed. Individuals' incomes would vary, but the variations would be questions of production only, since each man's income would depend entirely on the amount he produced. Exchange being practised, questions of "distribution" arise because each man's income depends not only on how much he produces but also on the value of what he has to sell, *i.e.* on how much of certain other things he can get in exchange for a given quantity of his work or of the use of his property.

Adam Smith showed a very fair appreciation of the importance of exchange with regard both to production and distribution. He rightly attributed what he called the "division of labour," but what is now usually called the "division of employments," to the practice of exchange, and he did not treat of wages, profits, and rents, till he had discussed "the rules which men naturally observe in exchanging" goods (*Wealth of Nations*, bk. i. ch. iv.) Unfortunately, James Mill, to whom the common arrangement of English works on political economy is chiefly due, seems to have had no adequate conception of the importance of exchange. He spoke of it as if it were a mere incident which occasionally happens to commodities after they have been produced and distributed (*Elements of Political Economy*, Introduction), and when he endeavoured to improve upon J. B. Say's division of political economy into Production, Distribution, and Consumption, by inserting Exchange, or "Interchange" as he called it, he placed it not only after production, but after distribution also. M'Culloch returned to Say's arrangement, but J. S. Mill followed in his father's footsteps, treating exchange after distribution, and declaring distinctly that "exchange and money make no difference in the law of wages, in the law of rent, nor in the law of profits" (*Principles*, bk. iii. ch. xxvi., Contents). But so far is this from being the case that the very existence of wages, rent, and profits, including interest, is dependent upon exchange. The payment of any particular sum of wages, rent, or profits is a case of exchange, and every variation in wages, rent, and profits is a variation of value, wages being the value of work done, rent the value of the use of land, and profits, the value of the use of capital and of the capitalist's services (see Sidgwick, *Principles of Political Economy*, bk. ii. ch. i. § 2). Of writers since J. S. Mill, most have so far deviated from his arrangement as to place "exchange" before "distribution," *e.g.* Walker, (*Political Economy*), or, with Profs. Sidgwick and Marshall, to treat exchange and distribution as too intimately connected to be treated separately (see DISTRIBUTION). E. C.

EXCHANGE, VALUE IN. Value in exchange, or exchangeable value, denotes a ratio of exchange—"the ratio of the number of units of one commodity to the number of units of another commodity for which it exchanges"; as Jevons particularly clearly points out (*Theory of Political Economy*, ch. iv.), and most authorities admit. The unsettled question is: What are the circumstances which cause the ratio to be what it is? "Utility and difficulty of attainment," answers Mill (bk. iii. ch. ii.), and similar terms are used by almost all economists, but in various shades of meaning, and with different emphasis on each of the two factors. The confusion is aggravated by the not sufficiently noticed circumstance that the operation of the two causes, utility and difficulty, is different in different classes of transactions. It is proposed here to discriminate those essentially distinct cases; mapping out and partially exploring the ground, which may be more fully investigated under the head VALUE.

A convenient tripartite division—Two-sided monopoly, one-sided monopoly (or one-sided competition), two-sided competition—is based upon the degree in which competition is present.

I. The action of competition is at a minimum where the dealers in two articles exchanged are single individuals, or bodies of persons actuated by one will, *e.g.* two governments negotiating a commercial treaty, or a trade-union coming to an agreement with a combination of masters about the rate of wages. The general principle in this case is that both parties will be gainers

by the bargain; in technical language the total utility (see CONSUMER'S RENT, DEMAND, DUPUIT, FINAL UTILITY), of each will be greater after than without the transaction. But to what extent each party will be gainers is not in general determinate; there is a sort of indefinite tract, a "spielraum" (Böhm-Bawerk), within which the point of equilibrium must be determined by other than purely economic considerations. Jevons well says: "the existence of combinations in trade disputes usually reduces them to a single contract bargain of the same [this] indeterminate kind. The men, for instance, ask for 15 per cent advance of wages all round. Rather than have a strike, it might be for the interest of the employers to give the advance, or for the men to withdraw their demand; *a fortiori*, any intermediate arrangement, would still more meet their views. But there may be absolutely no economic principle on which to decide the question. Mathematically speaking, the problem is an indeterminate one and must be decided by importing new conditions" (*State in Relation to Labour*, p. 154).

II. Where there is a monopolist, sole or corporate, on the one side, and on the other side an indefinite number of buyers, or sellers, competing with each other, the most general principle is that the monopolist will beat down the other parties to the point at which each of them is only just a gainer by his bargain; the addition to the total utility of each will be a minimum. The "law of indifference" that there should be one price in a market is not in general true of monopoly. The oppressiveness of the monopolist is modified by regard for his own future interests, as when an American railway company "builds up" a customer by giving him favourable terms, by fear of competition and of public opinion, and other considerations not here relevant (see MONOPOLY).

Mere convenience will often prompt the monopolist, instead of making separate terms in each transaction, as theoretically conceivable, to prescribe rates for classes of persons and goods. These charges are not in general proportioned to the cost incurred. Thus soldiers, in some foreign theatres, are admitted at a different rate from citizens; though the accommodation of the former may be as good as that of the latter. The differences between first and third class passenger fares, and between the rates for different kinds of goods, do not correspond to the outlay of the company in each case. For the object of the monopolist is to render his net profits a maximum; and this result will not in general be reached by apportioning charge to cost. True, if the cost changes, the arrangement most advantageous to the monopolist is apt thereby to be disturbed, and accordingly the charge will be in general altered, but not *proportionately* to the cost. Thus a tax on a monopolised article will in general increase the price, yet not equally with the tax, but, as it happens, by either more or less (Cournot, *Théorie Mathématique*, ch. vi.); the assertion which is often made that the charge will be unaffected by the tax is true only where the tax is a lump sum, not of a specific or an *ad valorem* tax.

In the case of monopoly then value is not measured by cost; but it is measured by utility: by total utility in case the monopolist takes the full advantage of his position; by final utility in the more usual case, where a rate is fixed for a class of commodities. In that case each consumer will go on purchasing up to the point at which it is just not worth his while to purchase another unit of commodity at the prevailing price.

III. The most general, or at least the most frequently treated, case is where there is unlimited competition on both sides of the market. This case may be subdivided into two: A, where value is not measured by cost of production, and B, where it is.

A, the first subdivision, corresponds to what Mill calls the "law of value anterior to cost of production, and more fundamental, the law of demand and supply" (see Mill, *Political Economy* bk. iii. ch. xvi. § 1, and Prof. Marshall's criticism of the passage; *Principles*, p. 544, 2nd edition). This case may be subdivided into two: (1) where production, or at least reproduction is impossible, or may be left out of account; (2) where this abstraction is not admissible.

(A1). To this head belong market values—not only commodities which cannot be multiplied rapidly, but also those of which the quantity in existence cannot be diminished rapidly, namely the precious metals in circulation (Mill, bk. iii. ch. ii. § 5). Prof. Marshall gives an instructive general type of the "temporary equilibrium" of market value; unaffected by cost of production which requires a "long period" in order to influence value (*Principles*, bk. v. ch. ii.).

Other articles referred by Mill to this category are "ancient sculptures, pictures by old masters, rare books or coins, or other articles of antiquarian curiosity" (*Political Economy*, bk. iii. ch. ii. § 2). Compare Prof. Marshall's enumeration of articles in the case of which "there is no connection between cost of reproduction and price" (at the end of the chapter last referred to).

Mill adds to his list of such articles "building grounds in a town of definite extent (such as Venice), the most desirable sites in any town whatever . . . potentially all land whatever" (*loc. cit.*). It should seem that his limitation of the statement to the case of "countries fully occupied and cultivated," is unnecessary. But it is impossible here adequately to discuss all the difficulties which the subject presents.

It is a nice question whether it is proper to

include in this section (A1) the exchange of present goods for future (cp. Böhm-Bawerk, *Positive Theory*), the settling of the rate of interest. Mill says "this is evidently a question of demand and supply" used in the same as in the preceding cases (*Political Economy*, iii. ch. xxiii. § 1). It is usual, however, to regard the "sacrifice" incurred by postponing consumption as a mode of *cost;* and so not to be included in this section.

(A2) To this class belong "commodities of which, though capable of being increased or diminished to a great extent, the value never depends upon anything but demand and supply" in a sense opposed to determination by cost of production (Mill, bk. iii. ch. ii., last paragraph). Perhaps the most typical case under this head is international trade, where in Cairnes's phrase (*Leading Principles*, bk. iii. ch. iv. § 4), cost "controls" but does not "determine" value; in the terms above used with respect to monopoly *affects*, but does not *measure*, value. Thus suppose tea produced in China exchanges for cutlery made in England. There is no equation between the efforts and sacrifices of the Chinese and the British producer. For the *mobility* tending to produce that equation is wanting. As an additional verification that value is not proportioned to cost in this case, it may be observed that if the cost of production be altered, *e.g.* by an improvement or a tax, the value in the international market will be altered indeed, but not in proportion to the alteration of the cost (Mill, bk. iii. ch. xviii. § 5, and bk. v. ch. iv. § 6).

The cognate case of "non-competing groups" (Cairnes) is amenable to the same law. The labour-market (cp. Mill, bk. iii. ch. ii. last par.) forms a particularly important instance —so far as it is legitimate to abstract efforts and sacrifices incurred with a view to preparation for that market (see below, p. 762, col. 1, par. 3).

Throughout the whole class of transactions which have been considered (A) there is wanting that adjustment between remuneration and effort and sacrifice which is the essence of the classical doctrine that cost of production determines value. Up to this point those who have impugned or ignored that doctrine are correct.

(B) A transition from the *régime* of "non-competing groups," to "industrial competition" (Cairnes) is obtained by supposing removed the barriers which have prevented competition. There ensues with the mobility of industry the equation of "net advantages" (Marshall) in different occupations. It will be convenient to break up class B in two: (1) where abstraction is made of division of labour; (2) more concrete.

(B1) Suppose each worker free to apply his labour in *doses*, or increments, to any industry —the abstract supposition implicitly made by Jevons in his analysis of labour (*Theory*, ch. vi.). No one will work in any branch beyond the point at which the trouble attending the last increment of product is just compensated by its remuneration. In this case then it becomes true that value is measured by the final disutility of the producer; while it does not cease to be true that, as in former cases, value is measured by the final utility of the consumer. There is no opposition between these verities; one need not be subordinated to the other.

In this case the relation between the two factors of value, utility and disutility, is almost as symmetrical as in what Prof. Marshall calls "the simplest case of equilibrium between desire and effort when a person satisfies one of his wants by his own direct action, as for instance when he picks blackberries. . . . After he has eaten a good deal the desire for more diminishes, while the task of picking begins to cause weariness which at last counterbalances the desire for eating, and equilibrium is reached." (*Principles*, bk. v. ch. iii. § 1). In such a case the question whether it was the desire, or the weariness, which "determined," or "regulated" the equilibrium would be insignificant.

The "fundamental symmetry" (Marshall) between the forces of demand and supply is aptly represented by mechanical illustrations. "Just in the same way, when several balls are lying in a bowl, they mutually determine one another's positions; and again, when a heavy weight is suspended by several elastic strings of different strengths and lengths, the equilibrium positions of all the strings and the weight mutually determine one another" (Marshall, *Principles*, bk. vi. ch. i.). The principle that water seeks its own level has been employed by Dr. Irving Fisher in his masterly *Investigations in the Theory of Value and Prices* (from *Transactions of Connecticut Academy*, vol. ix., July 1892) to construct a more elaborate illustration of the great principle thus enounced by Cournot, "Le système économique est un ensemble dont toutes les parties se tiennent et réagissent les unes sur les autres."

What has been said of the relation of disutility to value applies equally, or even better, to the "sacrifice" of postponing consumption. As Prof. J. B. Clark well says (*Yale Review*, No. 3), "the final act of abstinence is like the last act of labour, the costliest of all" . . . "the cost entailed on society by its final acts of abstinence is a second possible measure of value." It may be observed that the abstraction proper to this section (B1) is not so violent in the case of capital as labour. The idea of a capitalist distributing his outlay among different enterprises, from each of which *ceteris paribus* he will expect a similar return—is one that is partially realised in the "share" market. Compare Cournot, *Principes de la Théorie des Richesses*, 1863, Art. 45.

(B2) The "fundamental symmetry" between

utility and disutility as factors of value, continues to subsist when we restore the concrete circumstance of division of labour. But superficial differences arise. The individual may be conceived as seeking to maximise his total utility, *per saltum* by a change of occupations, rather than by doses distributed at different points of the industrial system. The equation of "net advantages" in different occupations, rather than of final disutilities, is now the condition. But the analogy of physical equilibrium is still appropriate. "The normal value of everything rests, like the keystone of an arch, balanced between the contending pressures on its two opposing sides. The forces of demand press on the one side, those of supply on the other" (Marshall). We must regard "the various elements of an economic problem—not as determining one another in a chain of causation—A determining B, B determining C, and so on—but as all mutually determining one another" (*ibid.* preface to 1st ed., p. xiv.).

To rightly apprehend the relation between value and cost of production it should be considered that one occupation may comprise several commodities. The production of different articles has been joined together by nature or custom. It would be idle to expect the value of beef and hides to be respectively proportioned to the quantity of labour "worked up" (Ricardo) or "congealed" (Marx) in each. A person who chooses a literary or academic career may hope to be, on the whole, as well off in that as in any other line open to him; but he must not expect the pay of each particular task—*e.g.* writing an article, or giving a lecture—to be proportioned to the trouble (cp. Mill on *Subsidiary Industries*, bk. ii. ch. xiv., and see JOINT PRODUCTION).

The sense in which value, in the case under consideration (B2), is determined by cost of production, as well as marginal utility, appears to the present writer to have been best stated by Prof. Marshall. Besides showing the interdependence of the two factors, as above mentioned, he also makes it clear that *time*, "a long period," is required in order that the forces of supply should work themselves out. Thus in the case of labour the adjustment between cost and value must be dated from the time when parents begin to make efforts and sacrifices with a view to the education and advancement of their children. There is presented the vast conception of trained industry put upon a future labour-market, by parental providence, for vicarious remuneration.

But perhaps no form of words devised by one person can be expected to recommend itself to all others as the best adapted to express the subtle relations of utility and cost to value. As in higher spheres of speculation, it may be hoped that differences of doctrine are less important than at first sight would appear.

[As to the indeterminateness of the bargain between two individual or corporate units, see Auspitz and Lieben, *Theorie des Preises*, p. 381.—Böhm-Bawerk, *Positive Theory* (translated by W. Smart), bk. iv. ch. ii.—Edgeworth, *Mathematical Psychics*, p. 21, *et seq.*—Jevons, *Theory of Political Economy*, pp. 130-137, and Marshall, *Principles of Economics*, p. 715; Mathematical Appendix, Note xii.—Menger, *Grundsätze*, pp. 176-178.—Price, *Industrial Peace*, pp. 14 and 54.—Sidgwick, *Political Economy*, bk. ii. ch. x. § 3 (end), also p. 349.

On the abstract theory of monopoly, see Cournot, *Principes Mathématiques*, chs. v. and vi. *et passim.*—Hadley, *Railway Transportation*, and other books and reports relating to railways.—Marshall, *Principles of Economics*, bk. v.

The authorities on the more general case of value in exchange defy quotation by their number. Those to whom the present writer is most indebted have been mentioned in the text.] F. Y. E.

EXCHANGE, VALUE IN. HISTORY OF GROWTH OF THEORY. For the purpose of an elementary survey of the history of the theory of value we may roughly divide the various theorists into two "schools"—the "cost-of-production" school and the "utility" school. The "cost" school is the older; its sway over our science has only begun to be broken in the last few decades by the "utility" school, the earliest quite consistent representatives of which wrote in the middle of the 19th century.

The "cost-of-production" school.—The first step towards an analysis of the economic phenomenon of value consisted in a discrimination between value in use and value in exchange. Aristotle makes this important distinction: "To take *e.g.* a shoe, there is its use as a covering of the foot, and also its use as an article of exchange" (*Polit.*, i. 9, p. 22 of Welldon's Transl.). His example is followed, among English economic thinkers, by Locke ("Considerations of the lowering of interest and raising the value of money," in *Works*, ed. 1714, ii. p. 21) in the end of the 17th, and by Hutcheson (*System of Moral Philosophy*, 1755, ii. p. 53) in the middle of the 18th century. Locke, *l.c.*, speaks of "the intrinsic natural worth of anything," as separate from its "value"; and Hutcheson, *l.c.*, observes that "the prices and values in commerce do not at all follow the real use or importance of goods for the support . . . of life." French physiocrats (*e.g.* Dupont and Quesnay), speak of *valeur usuelle* and *valeur vénale;* and Turgot distinguishes between *valeur estimative* and *valeur commerçable* or *échangeable*, defining the first as a purely individual, the second as an essentially social mode of weighing the sacrifice, necessary in order to get possession of the commodity, against the enjoyment of possessing it. English economic treatises of the 18th century sometimes show an appreciation of the difference between use value and

exchange value by discriminating between the words "worth" and "value."

When Adam Smith wrote his *Wealth of Nations*, he made this old primary analysis of value the basis of further analysis. He first hints that "things" must have some "value in use" in order to have any "value in exchange," and then for a time entirely drops "value in use" out of the discussion, proceeding to investigate "what is the real measure of this exchangeable value; or, wherein consists the real price of all commodities," and "what are the different parts of which this real price is composed or made up" (bk. i. ch. iv. p. 42, ed. 1793). He does not explicitly treat the problem: How does value measure men's desires to possess, or consume, commodities? This significant feature is, however, to be found among the French physiocrats. Turgot—("Valeurs et Monnaies," in *Œuvres*, ed. Daire, vol. i. p. 83) says: "For an isolated individual, the *valeur estimative* of an object is precisely that portion of his total faculties (*la portion du total de ses facultés*), which corresponds to his desire for the object, or which he is willing to employ in order to satisfy this desire." Adam Smith proceeds (comp. bk. i. ch. iv. and ch. vii.) to discuss "the different circumstances which sometimes raise some or all of these different parts of price above, and sometimes sink them below their natural and ordinary rate," *i.e.* their cost of production—or "the whole value of the rent, labour, and profit, which must be paid in order to bring" the commodity to market. Here he looks at the problem chiefly from the point of view of the seller, as if exchange were regulated almost exclusively by estimates of labour or cost. In this connection he uses "worth" and "cost" as identical terms. The manner in which Adam Smith treated this question gave rise to that school of economic thinking which (to use the phrase of Professor Nicholson, art. "Value" in *Ency. Brit.*) regards utility "simply as a kind of entrance examination which every commodity must pass to enter the list of valuables, whilst the place in the list is determined by variations in the degree of the difficulty of attainment."

Ricardo states: "Utility then is not the measure of exchangeable value, although it is absolutely essential to it" (*Principles*, ed. Gonner, p. 5). Elsewhere (pp. 7, 8), Ricardo speaks of labour as the "foundation of the exchangeable value," and of "quantity of labour realised in commodities" as "regulating their exchangeable value."

Malthus (*Principles*, ed. 1820, p. 52) sees that value in exchange "does not depend merely upon the scarcity in which commodities exist . . . but upon the circumstance of their not being distributed . . . in such quantities to each as the wills and powers of individuals will enable them ultimately to effect by means of exchanges." He does not, however, search further into the relation between "such quantities" and their value in use. This latter term he describes in his *Definitions* (ed. 1827, p. 234) as being "synonymous with utility. It rarely occurs in political economy, and is never implied by the word value when used alone."

J. S. Mill emphasises more strongly than his predecessors the importance of the play of supply and demand in determining exchange value. He, however, retains Ricardo's notion of two laws of value: one for commodities that "are susceptible of being multiplied at pleasure," and another for commodities that are not. These latter, "no doubt, are exceptions," and it is for these latter that he conceives his supply-and-demand theory of value (*Principles*, bk. iii. ch. ii.).

Karl Marx, the founder of German social democracy, seeks, on the lines of Hegelian dialectics, to separate value in use totally from value in exchange. The latter is "something quite independent" of value in use; and an investigation of value in use may be of some good in commercial education, as "die Disciplin der Waarenkunde," but does not belong to economic science, though "nothing can have exchange value without being a thing of utility" (*Das Kapital*, ed. 1883, pp. 2 and 8). Exchange value, Marx continues, is a ratio, and as where there is a ratio there must be homogeneity, he arrives at the conclusion that commodities can only be homogeneous as products of human labour. This, therefore, determines value. Marx's theories, though they have never been accepted by any economist of note, are worth consideration, partly because of their enormous influence on socialistic workmen in different parts of the world; partly because they undoubtedly display some of the worst consequences of consistently neglecting to analyse consumption or demand as carefully as production or supply.

Turning to the French, German, and other Continental theorists of the cost-of-production school, we find that, with few exceptions, they have been far more disposed to devote attention to the utility element of value in exchange than the "classic" English school from Smith to Fawcett. Though there are most important scientific divergences between the majority of 19th century German economists and the new "Austrian school," it is still by no means difficult to look upon the former as slowly and laboriously paving the way for the latter.

J. B. Say indicated (*Traité*, ed. 1803, ii. p. 58) that the fundamental elements of value in exchange were, the quantities offered and demanded, and the expense of production, which latter he called "the natural value" of the commodity. He set the example for later French

economists of treating the value problem as essentially dealing with the laws which determine when and how "utilities" exchange against one another. "No doubt what determines us to give up a commodity which we possess in order to get another is some quality in this other commodity which pleases us, and which quality is not to be found, or to be found only in less amount (*à moindre dose*) in the commodity which we give in exchange" (Coquelin and Guillaumin, *Dict. de l'Éc. Pol.*, 1853, vol. ii. p. 808)—this, and not the cost of production, is the starting point of most French discussions of value. J. Garnier's definition (*Traité d'Éc. Pol.*, ed. 1889, p. 280): "things have value in exchange when they are useful and, at the same time, transferable and scarce; that is to say, value in exchange is exchangeable utility, corresponding to the amount of labour which the thing saves, and, in most cases, owing its existence to labour and other expenses," is characteristic of the standpoint of many French economists. An exception from the general French attitude is F. Bastiat, notable not so much for solid scientific merits as for a widespread popularity. He defines value in exchange as "the proportion (*rapport*) between two services exchanged" (*Harmonies Économiques*, ed. 1851, p. 118).

Among most German economists of the 19th century there is a tendency to treat utility as of at least equal importance with cost of production in the determination of exchange value, "The value in exchange of a commodity, or its suitableness for the purpose of being exchanged against other commodities, depends upon that combination between use-value and cost-value which has its rise in the economic relations of men one with another," writes W. Roscher in his *System der Volkswirthschaft*, ed. 1882, i. p. 10. And Schäffle defines value in exchange as "a disguised comparison between the cost-values and the use-values of the two commodities which are to be exchanged against each other" (*Kapitalismus und Socialismus*, p. 35). In his *Bau und Leben des socialen Körpers*, ed. 1878, iii. p. 279, the same writer shows that exchange value is at the same time an individual and a social phenomenon. Adolph Wagner (*Allgem. od. theoret. Volksw.*, Thl. I., *Grundlegung*, ed. 1876, p. 47) says that "the exchange value of a commodity depends, for the individual who demands it, upon its degree of concrete utility for him, and upon the difficulty of getting it." Wagner is careful to observe that value in use is "the foundation of all the estimates" which determine exchange value, and that difficulty of attainment is an incident which, though in most cases present, can by no means be used exclusively for the definition of exchange value. The position of the majority of living German economists is also well represented by Professor Neumann in Schönberg's *Handb. d. Pol. Oek.*, ed. 1885, vol. i. p. 156, etc. He proposes to abandon the phrases "value in use" and "value in exchange" as not sufficiently emphasising the all-important personal element in value. The essential thing in all the varying meanings of value (*Werth*) is "the estimate (*Beurtheilung*) of the usefulness or fitness of a thing for human interests, wants, or aims." Neumann, however, does not enter into any far-reaching examination of the relations between his subjective and objective "categories of value." This intermediate position between the extreme cost-of-production school and the modern utility school is, however, not taken by Max Wirth, Prince Smith, and several other German "free traders." Their value theory is very closely related to that of BASTIAT (*q.v.*) and to that of the classic English school. Another notable dissenter from the majority of German economists is Eugen Dühring. He has adopted the value theory of H. C. Carey, according to whom value "results exclusively from labour." Value in exchange is "the measure of the resistance offered by nature, to the possession of the things desired," or "the measure of the power of nature over man" (*Principles of Social Science*, ed. 1877, ch. vi. § 88). The economic writers among the German social democrats continue to follow Karl Marx.

[In the following works are to be found references to the more important writers of the cost-of-production school both in England and on the Continent. W. Roscher, *System der Volkswirthschaft*, ed. 1882, vol. i. p. 10-12, footnotes.—Adolph Wagner, *Grundlegung*, ed. 1876, pp. 37-40, 43, footnotes.—Schönberg, *Handbuch*, ed. 1885, vol. i. p. 156, footnote; also footnotes to several of the following fifteen pages.—Coquelin et Guillaumin, *Dictionnaire de l'Éc. Pol.*, 1853, article "Valeur."—J. Garnier, *Traité d'Éc. Pol.*, ed. 1889, pp. 275-280, 692-694.—J. R. M'Culloch, *Literature of Pol. Ec.*, ch. i.—J. K. Ingram, *History of Pol. Ec.*, 1888.—L. L. Price, *History of Engl. Pol. Ec.* since Adam Smith, 1890.—K. Marx, *Das Kapital*, vol. i., footnotes to ch. i.—E. von Böhm-Bawerk's *Kapital und Kapitalzins* (Engl. Transl. by W. Smart), contains in its historical part, vol. i., a great number of bibliographical references, which are very useful to a student of the history of the general theory of value, though the book deals only with the history of the theory of interest.—Specially for Italian theory: Augusto Graziani, *Storia critica della Teoria del Valore in Italia*, Milano, 1889.—Specially for early German theory: W. Roscher, *Geschichte der National-ökonomik in Deutschland*, 1874.]

The "Utility" School.—Though all economists insist that "utility is indispensable to value," and though many of the writers who have been classed as belonging to the cost-of-production school strongly emphasised the great importance of utility to value in exchange, they never succeeded in working out a consistent

quantitative theory of the general and necessary connection between utility and value in exchange. To have done this is the scientific characteristic of the "utility school." The principal achievements of this school, as far as they concern the general theory of value, consist (1) in the discovery of the connection between the variation of the utility to an individual of a unit of a commodity and the variation of the number of such units possessed or commanded by him; and (2) in the discovery of the law of the marginal determination of all forms of exchange value (see MARGIN). These discoveries led to the important distinction between total utility and degree of utility, and to the unravelling of the complicated connection between exchange value as determined in a market, under the influence of free competition between producers and consumers, and the marginal degree of utility of a unit of the commodity to individual dealers in the market. These deductions have led to the general theory that *value in exchange is a relative marginal degree of utility and a function of quantity possessed.* Hence it is concluded that variations in cost of production or difficulty of attainment can never directly affect or, strictly speaking, determine value in exchange, but only indirectly affect it, when and in so far as the variations in cost of production affect quantity possessed — such conditions as time and FRICTION (*q.v.*) being taken into account. What directly determines exchange value is not the desire to avoid work, the root idea of the "cost" school, but the desire to possess the commodity—not the production, the past history of the commodity, but the consumption, the future destiny of the commodity. This theory is the result of quantitative analyses of CONSUMPTION (*q.v.*). The "cost" school had in a very conspicuous manner neglected the theory of consumption—had indeed often denied that there could be such a thing. The "utility" school, on the contrary, looks upon the quantitative theory of consumption as the only sound basis of economic theory in general.

The root idea of the "utility" theory is to be found in economic treatises from the earliest time, *e.g.* Aristotle. "It follows," he wrote, "that such things as are the subjects of exchange must, in some sense, be comparable. . . . Money . . . measures everything, and consequently measures, among other things, excess or defect, *e.g.* the number of shoes which are equivalent to a house or a meal. . . . But this will be impossible unless the shoes and the house or meal are in some sense equalised. Hence arises the necessity of a single universal standard of measurement. . . . This standard is in truth the demand for mutual services, which holds society together; for if people had no wants, or their wants were dissimilar, there would be either no exchange, or it would not be the same as it is now" (*Nic. Ethics*, v. 8, p. 152 of Welldon's transl.). Condillac (*Le Commerce et le Gouvernement*, ed. Daire, 1847, p. 250) observes: "We say that a thing is useful when it serves one of our wants. . . . According to this utility we estimate the thing more or less. . . . Or, it is this estimate which we call value. . . . The value of things is then founded upon their utility, or, what amounts to the same, upon our wants for them, or, what still amounts to the same, upon the use we can make of them." B. Hildebrand (*National-ökonomie d. Gegenwart u. Zukunft*, 1848, p. 318) foreshadows the theory that value is determined by marginal utility and is a function of quantity wanted. The French engineer Dupuit, when attempting to find a measure for the utility of public works, observed that the utility of a commodity is often not only different for different individuals, but that it will vary enormously for the same individual when the quantity possessed or commanded by him varies. "The utility for the same individual of a piece of bread can grow from zero to the amount of his whole fortune" ("De l'influence des péages sur l'utilité des voies de communication," in *Annales des ponts et chaussées*, 1849, p. 185; also "De la mesure de l'utilité des travaux publics," in *Annales*, 1844). Dupuit states (*Annales*, 1849, p. 172) that his theory is an elaboration of that of P. L. O. Rossi, who considered the theory of utility as the true basis of economics. Other more or less fragmentary attempts at building a value-theory upon an analysis of utility are to be found in writings of K. H. Rau, von Thünen, Friedländer, Knies, Schäffle, L. von Stein, A. Walras, Th. de Quincey, Samuel Bailey, R. Jennings, and others (see the bibliographical notes by Menger and Jevons referred to below).

The first economists who succeeded in establishing and elaborating a consistent theory of value by a thorough analysis of consumption or demand, were A. Cournot and H. H. Gossen. In his *Recherches sur les Principes mathématiques de la Théorie des Richesses* (Paris, 1838) Cournot observes (p. 22): "What is truly important is to know the laws which govern the variations of values, or, otherwise expressed, to have a theory of wealth. This theory alone will allow us to show to what absolute variations are due those relative variations" (in values) "which fall within the field of observation." In the chapter on "the law of demand" Cournot writes: "Let us then assume that the annual demand D for each commodity is a special function F (p) of the price p of this commodity. To know the forms of this function would be to know what we call the law of demand. . . . The form of the function would evidently depend upon the nature of the utility of the commodity, upon the nature of the services which it can render, or upon the

enjoyments which it can procure, upon the habits and the customs of each people, upon the average wealth and upon the scale according to which this wealth is divided" (p. 50). Cournot proceeds to argue (p. 56) that "as the function F (p) is continuous, the function pF (p), which expresses the total value of the quantity annually demanded, must also be continuous." Further, it is possible to assign to p such a small value that pF (p) becomes zero, and also to assign to p so high a value that the same happens. It is easily seen that these quantitative relations between price and quantity demanded at that price have their exact analogy in the subjective fact, not treated by Cournot, that the value in exchange of a commodity is the differential coefficient of its value in use.

The treatise by Gossen entitled *Entwickelung der Gesetze des menschlichen Verkehrs und der daraus fliessenden Regeln für menschliches Handeln* (1st ed., Braunschweig, 1854), opens with the explicit assumption of economics being the theory of pleasure and pain—economic activity having for its aim the realising of a maximum of pleasure with a minimum of pain. He proceeds in a strictly logical sequence to expound the theories of utility, of labour, and of exchange. "The magnitude of the same desire," writes Gossen, "diminishes steadily, when we without interruption continue to administer to it, till at last a state of satiety is reached" (p. 4). He distinguishes between total utility, degree of utility, and marginal degree of utility.

The two early pioneers of the utility theory of value, Cournot and Gossen, failed to gain recognition. Their suggestive writings were practically unknown at the time when W. S. Jevons, Karl Menger, and Léon Walras, early in the seventies, published independently of each other their epoch-making treatises.

Jevons as early as 1860 thought out the outline of his theory, and had in 1862 published a preliminary notice of the same. His well-known *Theory of Political Economy* (1st ed. 1871, 3rd ed. 1888) has exercised a great reforming influence. Its most salient and enduring feature is the profoundly philosophical spirit in which its early chapters deal with the method and very foundation of the science. In his introduction (ch. i.) Jevons contends "that economics, if it is to be a science at all, must be a mathematical science . . . simply because it deals with quantities" (pp. 3, 4, 2nd ed., 1879). Having shown the mathematical connection between total utility, or value in use, and degrees of utility, having framed the law of variation of final or marginal degree of utility, and having shown how this law rules the distribution of a commodity in different uses, he only needs to define MARKET (*q.v.*) and to formulate the LAW OF INDIFFERENCE (*q.v.*) to lay the foundation of his theory of exchange (ch. iv.). This is expressed in the words: "The ratio of exchange of any two commodities will be the reciprocal of the ratio of the final degrees of utility of the quantities of commodity available for consumption after the exchange is completed" (p. 103). Jevons continues: "There are two steps between labour and value. Labour affects supply, and supply affects the degree of utility, which governs value, or the ratio of exchange" (p. 179).

Léon Walras, in *Éléments d'Économie politique pure, ou Théorie de la Richesse sociale* (1874), and subsequent works supported the same theory of value as Jevons, the chief point of difference being one of terminology. Walras, for example, often using the highly concentrated and therefore rather ambiguous term rarity (*rareté*) instead of final or marginal degree of utility. Léon Walras developed the mathematical utility theory of value expounded by his father A. Walras, and he also utilised the work of A. Cournot above referred to.

Karl Menger published his *Grundsätze der Volkswirthschaftslehre* in the same year as Jevons his *Theory* (1871). In the preface he announces as his object to frame so general a theory of price that it accounts not only for price of commodities but also for interest, wages, rent, etc. (p. x.). He approaches his subject by way of an elaborate analysis of the economic significance of goods (*Güter* as distinct from *Waaren* or commodities), and he establishes in the very first chapter the doctrine of the different "orders" of goods—a very characteristic part of his theory, and valuable as an attempt to broach the special problems of the value of tools or of goods which only indirectly serve our life. Menger's theory of value (pp. 98-99 and 107-108) is in substance the same as that of Jevons and Walras though not formulated with the same amount of precision.

[Between the years 1875 and 1890 there grew up in England, America, Austria, Germany, Holland, Italy, France, and Denmark, a "school" of economists engaged in developing the science on the lines of Jevons, Walras, or Menger. The well-known treatises of such Continental economists as E. von Böhm-Bawerk, Friedrich von Wieser, Wilhelm Launhardt, R. Auspitz, and R. Lieben, N. G. Pierson, Emil Sax, Harald Westergaard, are all founded upon the utility theory of value. The new theory has, besides, exercised a very marked influence on many prominent economists of the present day who, like Professor H. Sidgwick and Professor F. A. Walker, cannot be said actually to belong to this "utility school."

Among English treatises distinctly belonging to the "utility school," we can only mention a few. F. Y. Edgeworth's *Mathematical Psychics* (1881) is interesting as an attempt at utilising the new theory for establishing, on strictly mathematical lines, a science of social life. *The Alphabet of Economic Science*, by Ph. H. Wicksteed (1888), takes up the theory of value of Jevons, and gives a popular explanation of the fundamental

theorems of the higher mathematics upon which it rests. Professor A. Marshall, in his *Principles of Economics*, vol. i. (1890), shows the true organic connection between the modern theory and the doctrines of the leading economists of the past.

The most complete bibliography to the value theory of the utility school is found in the appendix to W. S. Jevons's *Theory of Political Economy*, ed. 1888. See also: Carl Menger, *Grundsätze der Volkswirthschaftslehre*, thl. i. 1872 (notes to pp. 78-80, 108-113, 215-216, are excellent as a guide to German writers on the subject); Léon Walras, *Théorie de la Monnaie*, 1886, pp. vii.-ix.—Auspitz and Lieben, *Untersuchungen über die Theorie des Preises*, 1889 (preface).—Graziani, *Storia critica della Teoria del Valore in Italia*.—R. Zuckerkandl, article "Preis" in Conrad's *Handw. b. d. Staatsw.*, also same writer's *Zur Theorie des Preises*, 1889.—E. Cannan, *History of the Theories of Production and Distribution in English Pol. Ec. 1776-1848*, 8vo, 1893.] G. F. S.

EXCHANGE (USURY). See USURY.

EXCHANGE, as BOURSE. (*a*) A place where merchants, bankers, brokers, etc., assemble at certain hours for the transaction of business; and (*b*) the assemblage itself. In both senses the word is commonly contracted into 'Change.

"The last yere, I shewyd your goode lordeshipe a platte, that was drawen howte for to make a goodely Bursse in Lombert strette for marchaunts to repayer unto. I doo suppose yt wyll coste ii. M. li (£2000) and more, wyche shalbe very beautyfull to the citti, and allsoo for the honor of our soverayngne lord the Kinge." Thus wrote Lord Mayor Sir Richard Gresham in 1538 to Cromwell, the lord privy seal. He had recently seen and admired the new *Burse* at Antwerp, and was anxious that London merchants, whose custom it was to congregate twice a day in the open air in Lombard Street, should be provided with a similar house, or covered walk, to shelter them from the inclemency of the weather. But powerfully as he advocated the scheme, it did not find favour. Owners of property were difficult to treat with; and, as the merchants themselves appear to have been completely indifferent, the plan was suffered to fall through. After the lapse of a quarter of a century, it was however again brought forward by his public-spirited son, Sir Thomas Gresham. On the death of his only child in 1564, Sir Thomas appears to have conceived the idea of making his country his principal heir; he munificently offered, provided the city would furnish a suitable site, to erect the building at his own expense. His fellow-citizens gratefully accepted the offer; they raised a sufficient sum by subscription, purchased the piece of land on which the Royal Exchange now stands, and conveyed it over to him. By the end of 1568, merchants were able to hold their meetings within the building. It consisted of a quadrangular arcade, enclosing an open court, and bore a general resemblance to the *Burse* at Antwerp. After completion, it was inspected and formally opened (23rd January 1571) by Queen Elizabeth, who "caused the same Burse by an herralde and a trompet to be proclaimed the *Royal Exchange*, and so to be called from thenceforth, and not otherwise." By Gresham's will the Royal Exchange was vested in the Corporation of the City of London and the Mercers' Company, conjointly. And to them it in due time reverted. Exactly 100 years after the laying of the foundation stone the building was swept away in the great fire of 1666; and its successor, the second exchange, was also destroyed by fire in 1838. The present structure dates from 1844.

To the stranger who visits the Royal Exchange, expecting to find there the very heart of the business of London, the deserted appearance of its interior is a source of wonderment; with the exception of a short interval in the afternoon, when it is resorted to by dealers in some of the minor branches of commerce (paper, drugs, etc.), and of an hour or so on Tuesdays and Thursdays, when foreign bills are dealt in, it appears to be given over to loungers. It has to a great extent outlived its object. In Gresham's time, and for long afterwards, the space afforded by the quadrangle and ambulatory was sufficient for all requirements, but to-day the building would hardly give standing-room to a tithe of those who every day come together in the city to discuss and transact affairs; long ago it became apparent either that the exchange must be enlarged, or that some of those who frequented it must go elsewhere. One after another, the larger and wealthier traders departed and built homes for themselves in more convenient localities. Dealers in stocks and shares, produce merchants, shipowners, insurance underwriters, coal, metal, corn, hop, wool-traders, and others, now possess their own separate exchanges. There is one small but important group which transacts business in the old parent centre, and which the mind more particularly associates with the word "'Change." On Tuesdays and Thursdays, after luncheon time, the principals of the great merchant-banking houses (Rothschild, Baring, Huth, Kleinwort, etc.), the representatives of a few of the more enterprising joint-stock banks (London County and Westminster, London City and Midland, Martins, etc.), and the London Branch managers of all the foreign and Anglo-foreign banks (Crédit Lyonnais, Deutsche Bank, Swiss Bankverein, Anglo-Austrian Bank, etc.), collect at the eastern end of the courtyard to discuss matters of common interest and to deal in foreign bills. The attendance is never more, perhaps, including the brokers, than five or six score; but it comprises members of firms whose names are "household words" on every bourse throughout the world, and is eminently representative of the financial side of England's

Welthandel. Hubbub and excitement, apparently necessary concomitants of the dealings in other commercial assemblies, are here absent; the negotiations are conducted in a quiet undertone, and with an air of nonchalance which might almost lead the onlooker to believe that the chief object of the meeting is conversation, and that business is quite a secondary consideration.

Formerly the foreign mails were despatched from London twice a week, on Tuesdays and Fridays, and on these "post days" alone were foreign bills negotiable on "'Change." The custom of a bi-weekly meeting (since 1879 Tuesday and Thursday) still subsists, as it is found that so far as the business in bills of exchange is concerned, two exchange-days are sufficient for all practical purposes, and are perhaps more advantageous than a daily market would be, inasmuch as they collect on the same spot and at the same time all the important buyers, and therefore establish a genuine quotation. The business in cheques and telegraphic transfers, which has now attained huge proportions, is of too urgent a nature to wait for "post-day," and is effected daily and hourly by telephone.

Owing to the fact that the settlement by bill of our mercantile transactions with other countries is usually effected by means of drafts on London from abroad—the bills drawn on abroad from England forming only a very small fraction of the whole, that is to say, our exporters, instead of drawing against their sales, mostly arrange to have remittances sent them; and our importers, instead of remitting against their purchases, mostly arrange to accept,—the traffic in "London" paper on the Continental bourses is on a far larger scale than that of the dealings in foreign bills on the Royal Exchange; and the buying and selling of long or short "London," either for the portfolio—as stock-in-trade, investment, or speculation, as the case may be—or in execution of orders received from customers, is part of the regular round of a Continental banker's duties, and necessitates his daily attendance at the bourse. An English banker, on the contrary, is rarely or never seen on "'Change," as he confines his bill-operations to paper payable at home, and immediately disposes through his broker of whatever foreign paper may be sent up to him from the provinces for negotiation. A notable consequence of this predominance of foreign-drawn over English-drawn paper in the various markets is that the course of most of the exchanges is controlled from abroad, and that the fluctuations registered here are mere reflections of the movements produced by forces operating on the other side.

G. C.

EXCHANGE, STOCK. The largest stock exchange in the world is that of London, in which securities to the nominal value of not less than £10,000,000,000 are marketable (1914). These securities are officially recognised, and there are besides numbers which have no official quotation, but are yet dealt in from time to time according to the speculative rage of the moment. There are also in the United Kingdom twenty other exchanges, including Manchester, Liverpool, Leeds, Sheffield, Newcastle, Birmingham, Bristol, Aberdeen, Edinburgh, Glasgow, Dublin, Belfast, Cardiff, Halifax, Huddersfield. The whole of these do not include the attendance of as many persons, or turnover of so much money and securities, as the London stock exchange alone. Their business, however, presents some points worthy of notice (see EXCHANGE, STOCK, PROVINCIAL). The London stock exchange is not only the chief of the English stock markets; it is also linked internationally with nearly all the financial centres of the world, and it would be difficult to name a security which could not find a market in London, either through the ordinary channels provided by *arbitrage* dealers (see ARBITRAGE), who buy in the cheaper and sell in the dearer markets, or through the agency of trusts which, by the aid of English investments, form funds applied to the purchase of a vast variety of securities in European, Asiatic, American, and Australian exchanges as well as those which are of native production. There has never been anything in history like the London stock exchange for magnitude and extent of financial resources. It is an immense business engine with certain unavoidable drawbacks which give it also the nature of an extensive gambling centre. On the whole, it has been found by experience that the advantages and merits of such an organisation outweigh altogether the drawbacks imposed by the too-speculative spirit of mankind. It has been asserted, and even by members of the stock exchange, that nine-tenths of the operations on which stockbrokers live by commission are gambling operations. And though no doubt the speculative public pay annually a heavy tax to the professional stock exchange element—rough estimates are made that in prosperous years the annual revenue of members of the London stock exchange may amount to £3,000,000 or £4,000,000,—yet the stock exchange provides a useful barometer; and sometimes by its extreme sensitiveness to events which have yet to happen, eases and mitigates the effects of disasters which would otherwise have assumed proportions of a national calamity. The stock exchange is always running ahead of anticipated events, and the events when they happen, being so "discounted," have the less effect if any effect at all. This is by no means the only public service done by the stock exchange. The modern fashion of turning over growing private undertakings into joint-stock companies makes the stock exchange a necessity. It is also a means by which astute men of business can

insure, or hedge, against the worst results of what would otherwise be a hazardous operation. Thus the stock exchange is often used as a hedge against commercial contracts. For example, if a group or firm of contractors have undertaken to supply steel rails for a South American railway at an advantageous rate, the chief contingency to be guarded against is default or discredit on the part of the state. While undertaking to contract on the one hand, they find it advisable to acquire the option to deliver stock at fixed prices on the stock exchange; so that, whatever happens, there is no great or irreparable loss to be feared. There has also scarcely been a boom in American securities in recent years without the life of Mr. Pierpont Morgan being insured by both London and Wall Street operators. Commercial operations which depend on the maintenance of peace in Europe can obviously be entered into with some sort of security when it is possible to hedge against disaster by recourse to the stock exchange. On the occasion of the coronation, both of King Edward VII. and of King George V., heavy insurances were effected at Lloyd's by stock exchange operators for the rise, on the risk of the death of the monarch. It is a two-edged tool, however, and can only be used safely by men of the greatest discretion and experience. We may usefully record here an extract from the conclusions of the royal commission on the London stock exchange, which reported in 1878 as follows:

"The public are enabled to count upon a reasonable speed and certainty in the transaction of business, and the vast amount of business done secures to those who deal in the London stock exchange as small a difference between the buying and selling prices as can be obtained in any other market. We think, however, that if it were possible, it would be desirable that the exchange should be open to the public,—not so much because an investor would in the event have any real control over the bargain which his broker might make for him, as for the purpose of removing a certain amount of jealousy and suspicion which is created in some minds by the present system." The stock exchange has not found it practicable to throw open its doors to the public, and it remains what it was—a strictly regulated club.

The report of the royal commissioners also contained these words: "In the main the existence of such an association, and the coercive action of the rules which it enforces upon the transaction of business and upon the conduct of its members, has been salutary to the interests of the public." The stock exchange having, or rather being, a valuable monopoly, it is not surprising that the tone of its government is exclusive. It has a share capital of £240,000, the shares being reckoned as £12 paid. The £12 shares are (in the year 1910) worth about £190 each, and none other than a member of the stock exchange is allowed to be a proprietor. For the year 1909-10, the dividend paid was £8 : 10s. a share, or 70 per cent of the share capital, and the net revenue of the year had been £211,810 : 2 : 3, after payment of interest at 3 per cent on £450,000 debentures. The share and debenture capital together are more than balanced by freehold and leasehold property, which stands at £1,080,628 : 6 : 7 in the accounts, and may be worth more. The value of the connection of the stock exchange may then be reckoned at something more than five millions sterling.

The management of the stock exchange has thus been good enough to stand the test of public opinion during the fast-working 19th century. About the year 1700, dealers in public securities found the accommodation in the Bank of England too small and migrated to 'Change Alley; thence to Sweetings Alley in 1773, where a room was engaged and kept up by subscription; and afterwards to Capel Court where, in the year 1802, a building was opened, but the public were excluded. There were at that time about 500 subscribers, and this was the formal beginning of the stock exchange, as it is now known. Seventy years ago the number of members was about 350, and now (1910) the number is 5019 besides 2344 clerks, who are admitted at reduced rates. The stock exchange included, as it still includes, a responsible body, a complete organisation, a local habitation, a public institution privately managed. Its Benevolent Fund is unique.

Mr. F. Levien, for many years secretary to the committee for general purposes, in his evidence before the royal commission in 1877, described the internal administration of the stock exchange in the following words: "The administration of the stock exchange is vested in two bodies, whose functions are distinct. First come the managers, who represent the proprietors or shareholders in the undertaking, under the deeds of 1802 and 1876, who are the executive of the landlords of the house and premises, have control over all monies paid for admission, fix annually the charge for admission of members for the year ensuing, appoint all officials, except the secretary to the committee for general purposes and the official assignees, and superintend all matters connected with the building, supplies, etc." He goes on to describe the functions of the committee for general purposes, who are the executive of the subscribers, and "have control over the business of the house; make and administer the rules and regulations for the conduct of the business of the stock exchange; adjudicate all questions between members and complaints against members by non-members, if desired to do so by the latter. They investigate the question whether their published requirements have been com-

plied with by governments and companies asking for settlements or official quotations, for loans or shares, and have vested in their hands the election by ballot of those who seek to become members of the stock exchange." This committee have been known to suspend or expel members for offences against the body, also for those against the public, seeing that such conduct would be calculated to bring the stock exchange into disrepute. On the whole, the management has been successful, and, again on the whole, is approved by public opinion. New members are elected and old members re-elected on the first Monday in March of each year. An applicant for membership must be recommended by three members of at least four years' standing, each of whom must pay £525 in case of default by the new member within four years of his admission. The full entrance fee is £525 and the annual subscription £42. (See BROKER; DEALER; JOBBER.) A. E.

EXCHANGE, STOCK, PROVINCIAL, IN GREAT BRITAIN AND IRELAND. The best known of these are at:—Aberdeen with 14 members, Belfast 32, Birmingham 60, Bradford 12, Bristol 32, Cardiff 19, Cork 23, Dublin 87, Dundee 18, Edinburgh 74, Glasgow 266, Greenock 12, Halifax 9, Huddersfield 11, Leeds 27, Liverpool 176, Manchester 104, Newcastle 16, Sheffield 39, and Southport 6; collectively (about the year 1910) 1037 members.

All are organised associations managed by committees, and the aggregate of yearly business transacted is very great. It is noted that cases of dispute and litigation between provincial brokers and clients are rare, and it is claimed on behalf of these institutions that no description of business in this country is carried on with greater rapidity and accuracy than that in which these exchanges are engaged.

Up to the year 1890 the provincial exchanges had no common understanding or organisation; but in that year the council of associated stock exchanges—that is to say of provincial stock exchanges—was established, a consultative body composed of delegates, generally the chairmen and deputy chairmen of the various exchanges. The council meets annually, or more frequently in cases of emergency; the presidency and administration being undertaken by the larger exchanges in turn. The provincial exchanges have undertaken the revision and codification of stock exchange rules with the object of securing identical arrangements in carrying on the business throughout the whole body of associated exchanges. Thus the notice of the rule of the Manchester stock exchange committee (*Economist*, January 7, 1911) is identical with that of the London stock exchange, with the difference that it is more stringent than the latter through the reference to the Prevention of Corruption Act 1906, and the rule that "no member of this exchange may divide commissions with any one." The first public action of this body was their successful attempt, by securing the guarantee of share titles, to avert from shareholders, in future, the disastrous possibilities opened out by the North Western Railway Company's now historical denial of their stock certificates. The London stock exchange declined to take action in the matter, until the principle of indefeasible titles to securities had been accepted by public bodies; the Forged Transfers' Acts, and the benefits resulting from them, will, accordingly, always be associated with the provincial exchanges, more especially with that of Liverpool, a member of which institution having secured the passing of these acts and put them into operation.

The business of the provincial stock exchanges consists largely of:—Transactions for investment in British, Canadian, and American railway stocks; dealings in shares of insurance, banking, shipping, commercial and industrial undertakings. The application of the Limited Liabilities Act adds largely to the number of these undertakings. Being practically brokers' markets, investors can there operate free from such profits as are absorbed by London dealers. The Association of Provincial Stock and Share Brokers, a new organisation which held its first annual meeting, June 27, 1914 (*Times*, June 29), promises to be useful.

EXCHANGE, FOREIGN. The term foreign exchange denotes the value at which an amount quoted in the currency of the country where the transaction originates is interchangeable with that of a foreign country. The quotation of foreign exchange fixes the market value, for the time being, of foreign currency in the place wherein the quotation is made. For instance, if the French exchange is quoted in London to-day at 25 frs. 20 c. for cheques on Paris, it means that for every sovereign a London banker would buy or sell 25 frs. 20 c. in a cheque on Paris—one must say buy *or* sell, because it is most unlikely that he would do both, for there is always a difference between buying and selling, therefore the quotation is generally twofold—for instance 25 frs. 20 c. to 25 frs. 25 c., meaning that the London banker would give the public an order on Paris for 25 frs. 20 c. for each sovereign he receives, or would give a sovereign for every 25 frs. 25 c. offered to him in the shape of a cheque on Paris.

He thus leaves a margin of profit of $2\frac{1}{2}$ centimes in each pound, either in buying or selling, the actual exchange being 25 frs. $22\frac{1}{2}$ c. This margin of profit pays for the trouble and outlay involved in the transaction, which the banker in London and his agent in Paris have to carry out.

It is necessary to point out that these quotations constantly fluctuate for various reasons, the principal cause being the balance of trade between different countries; let us cite an instance:

If operators in France sell in England goods or securities of a greater value than what English operators sell in France, the balance of trade is said to be against England; consequently the quotation in Paris for pounds sterling declines. There are, however, indirect influences on the exchanges between different countries; for example, England may owe money to the United States for wheat, cotton, or other commodities, while the United States may owe money to France for silk or wine. In that case the American merchant would probably send to France bills drawn on England against the goods which English merchants have bought from him. These bills being sold in Paris would tend to depress the quotation of pounds sterling in Paris, just as if England owed the money to France. We thus see that foreign exchanges play an important part in facilitating the settlement of debts due by one country to another, thus avoiding the cumbrous mode of paying international indebtedness by the transmission of specie.

Another cause of variation in foreign exchanges is the inequality of the value of money in different commercial centres; money, like water, finds its level, it flows, unless some obstacle intervenes, to those countries where a better rate exists, until it equalises those differences. Those obstacles are the question of credit, and of the dissimilarity in the respective currencies; where these things are equal, a difference in discount rates will attract or repel money from one country to another. For instance, when the Baring crisis occurred in November 1890, the Bank of England raised its rate of discount to 7 per cent., which rate was maintained for some time, and was higher than the value of money in other commercial centres. The effect was immediately apparent; all foreign merchants and bankers who had confidence in their London agents remitted money to obtain a higher rate of discount than what obtained in their respective countries. These remittances acted on the foreign exchanges, causing them to rise to the gold export point (see GOLD POINTS IN FOREIGN EXCHANGES), necessitating the shipment of gold to London.

Another effect of high discount rates is the depression in the value of merchandise and securities, such as bonds and shares held on borrowed money. These are sent to markets abroad where money is cheaper, and naturally money is sent to London in payment of the goods and securities received. Another cause of fluctuations in foreign exchange is internal disturbance, either social or financial, creating alarm and inducing the transference of money from one country to another for safe custody.

We have seen at intervals in Paris that disturbances have caused the exchange on London to advance very rapidly in consequence of large sums being sent to London for safe keeping.

The season when English people migrate to the Continent is generally marked by a decline in the value of sovereigns abroad, and the exchange is then said to move against this country. The quotation of exchange between countries using gold as the chief circulating medium can however only fluctuate between well-defined limits called the export or import gold points. Thus the exchange on London cannot for any length of time fall below 25 frs. 10 c., nor rise above 25 frs. 40 c.; because in the former case gold would be sent from London to Paris to purchase pounds sterling, and in the latter case the reverse operation would take place, and gold would be sent from Paris to London. The difference of 30 c. or 3d. per sovereign covers the freight and insurance, also the mint charges involved in converting the gold of one country into that of the other.

There is, however, considerable difficulty at times in fixing the exchange between this country and another which has a silver or paper currency. Sometimes the variations are great and rapid; sometimes it is difficult to fix a close ratio between buyers and sellers of exchange on countries having a basis of circulation different from our own. Let us take the exchange between this country and India, which is the largest silver-using country in the world. The exchange in London on India varies materially and suddenly. On some occasions there has been no reasonable quotation for bills on our great dependency, because of the uncertain value of silver. The rupee declined from the rate of 2s. ¾d. in 1864, to the rate of 1s. 2⅝d. in August 1892, and subsequently even lower. These enormous fluctuations arose from the variations in the gold price of silver in this country, but the fluctuations in the exchanges between India and other silver-using countries has been very slight.

Thus the exchange between Shanghai and Calcutta did not vary so much during the year 1891 as the quotation between London and Paris; in fact, the fluctuations between China and India seldom exceed ¼ per cent, which represents the cost of freight and insurance on transmitting silver between those countries.

The greatest variations, however, arise in the exchanges between this country and those where there has been a suspension of specie payments. The most notable instances are with Russia, Spain, and Portugal in Europe; and with Brazil, Chili, and Argentine in America. There is hardly a limit to the possible depreciation of a paper currency. We have noticed, with regard to Argentine, a premium on gold of 300 per cent, or a reduction in the value of paper to one-fourth of its former gold value.

All depends in these cases upon the quantity of paper money issued, relatively to demand and to the absorbing power of the country con-

cerned and upon the credit of the government which is responsible for the ultimate redemption of the paper currency. We know that almost every country has passed through this critical financial stage; even in this country, at the beginning of the 19th century, gold has been quoted at a premium of over 50 per cent, as against Bank of England notes. At such a time the foreign exchanges were greatly adverse to this country, and all gold was exported. Fifty years ago the United States had a similar experience of a forced paper currency with foreign exchanges all against that country, causing the exportation of gold and silver to pay for war stores. We thus see that foreign exchange acts like a barometer giving indications of the financial aspect in every country, acting as a warning when a financial storm is impending, counselling those who have too many engagements afloat to take in sail; while in fair weather it gives an assurance of smooth water ahead, administering a well-founded impetus to all who embark in legitimate enterprises.

[See Goschen, *Foreign Exchanges.*] S. M.

EXCHANGE, FOREIGN, practical working of. If it be sought to apply the theory of the foreign exchanges to practical ends, or to draw trustworthy conclusions from their fluctuations, the following axioms should be noted.

Firstly, the current rate of exchange is the price of a bill of exchange either at usance or at sight. It is not necessarily the ratio at which the money of one country exchanges for the money of another. At a time when *e.g.* a cheque on Berlin is to be bought at 20·40 marks to the £, it may be necessary to pay 20·20 for German gold coin (because it must be assumed that the seller has been at the expense of importing it); but 20·40 would be called the rate of exchange, not 20·20.

Secondly, the price of bills is governed by the ordinary laws of supply and demand. When they grow scarce they grow dear, when they become plentiful they become cheap. If they become very dear, the would-be purchasers look round to see whether there is anything else they can remit to better advantage—produce, let us say, or some particular stock exchange security, or one of the precious metals—and, as soon as they discover such an article, they cease buying bills, and the price stops rising; if they become very cheap, the would-be sellers consider whether it might not pay better to employ the money standing at their credit abroad in the purchase of something—gold, say, or a foreign bond—which is saleable at home, and immediately this becomes feasible they cease offering bills, and the price stops falling.

Thirdly, the rate of exchange at A for cheques on B must correspond, or tend to correspond, with the rate of exchange at B for cheques on A, assuming that credit has not been shaken on either side, and that there exists a free market for cheque and cable transfer. Otherwise exchange-dealers would secure a speedy and easy profit. Thus if Paris telephones "Cheque London 25·26" while here it stands at 25·24, bankers on both sides would instantly sell as much as possible, the result being as follows:—

London pays say £5000 (amount of the Paris draft), and receives £5000 (proceeds of its draft on Paris for fr.126,200 at 25·24).

Paris pays fr.126,200 (amount of the London draft), but receives fr.126,100, proceeds of its draft on London for £5000 at 25·26; showing without any outlay whatsoever, a gain of 100 francs. This is called arbitrage-business, and illustrates the manner in which the exchanges are actually regulated, for it is of course obvious that under the influence of such transactions the rates in Paris and London will very speedily be brought to a level.

Fourthly, as it is the custom of trade to give credit to the buyer who buys to sell again, most bills are drawn at a usance, varying from thirty days to six months, according to custom, and the usual exchange quotation applies to bills at usance. Between the exchange for a bill at sight and that for a bill at usance, the difference depends on the rate of interest prevailing in the place upon which it is drawn. The usance, for example, of bills on Italy is three months, and if interest in Italy rules at 4 per cent, a bill at usance should cost 1 per cent less than a bill at sight.

Fifthly, as the bills drawn on London from abroad vastly outnumber the bills drawn on abroad from London, the demand and supply of the former exercises a proportionately greater influence over the course of the exchange than that of the latter. In other words, the actual rise or fall takes place on the foreign market, and London in most instances merely adjusts its rates according to the quotations telegraphed from abroad.

Lastly, in those countries where the value of the currency oscillates in relation to gold, the exchange is subject to two sets of fluctuations—to fluctuations of limited extent caused by changes in the ratio of supply to demand, and to fluctuations of almost unlimited extent caused by changes in the value of the currency-medium. Thus, if the normal exchange with a paper currency country be 48d. per $ gold, or $5 to £1, a rise in the gold premium, which is illimitable, from 200 per cent to 300 per cent would cause the exchange to move from 16d. per $ paper, or $15 per £, to 12d. per $ paper, or $20 per £.

[See Lord Goschen, *Foreign Exchanges* (Effingham Wilson, 1863)—the classical work on this subject. For the calculations needed for "the solution of the problems encountered in the merchant's every-day experience," see especially the works of George Clare, *A B C of the Foreign*

Exchanges (Macmillan, 1895).—*A Money Market Primer* (Effingham Wilson, 1893).—H. Deutsch, *Arbitrage* (Eff. Wilson).—Ottomar Haupt, *Arbitrages et Parités*, 1894. Franklin Escher, special lecturer on Foreign Exchange at New York University, in *Elements of Foreign Exchange* (Eff. Wilson, 1910), gives an interesting explanation of the subject from the point of view of the United States.—Hartley Withers, *Money Changing*, 1913.] G. C.

EXCHANGE BETWEEN HOLLAND AND DUTCH INDIA. (The guilder converted in this statement as 12=£1.) To explain the working of the exchange between Holland and Dutch India, it is necessary to describe the different currency systems in force in the mother country and the dependency. To begin with that of Holland. At the commencement of the 19th century the state of the currency in the Netherlands was very unsatisfactory. From early times silver had been the only standard of value, but an almost unexampled variety of silver coin was in circulation, owing to the fact that, during the existence of the Republic of the United Netherlands, nearly every province had a separate mint. Gold coin had also been struck, and was a medium of exchange at rates officially fixed by the government; but silver alone was legal tender until the year 1816, when (Act of 28th September) dual legal tender was introduced at the ratio of 15·87, between the then current silver gilder of 200 aas weighing 9·61 grammes fine, and the ten guilder piece weighing 6·056 grammes fine gold.

Gold being thus over-valued, as compared with the bimetallic ratio of 15½ adopted by France in 1803, all the full weight silver coins were driven out of the country, and gold coin, struck according to the law of 1816, together with all the worn and clipped silver coin of earlier date, formed the only circulating medium.

To remedy this state of affairs it was enacted in 1839 (Act of 22nd March) that the historical guilder of the weight of 9·61 grammes fine silver should be reduced to the weight of 9·45 gram fine, thus raising the ratio from 15·87 to 15·60; but the clipping of the old coin continued on a most scandalous scale, so that often a premium of 5 to 7½ per cent had to be paid for full weight pieces. A thoroughly efficient reform of the currency became indispensable, and a general recoinage of all the old silver money, struck before 1839, was accordingly ordered by the Act of 22nd May 1845.

Within a couple of years a nominal amount of 85 millions of guilders old silver (£7,083,000) was withdrawn from circulation and converted into new coin, at a cost of some 8 millions (£666,600), the operation itself being to a great extent facilitated by the still existing double standard, gold coin being available for the use of the public in adequate quantities. At the same time, the question whether the double standard system could be continued, became a matter of ample discussion in the press, and after lengthened debates in parliament the law of 26th September 1847 was enacted, by which the monetary system of the Netherlands was based on the silver standard only, with the silver guilder of 10 grammes and $\frac{945}{1000}$ fine as the unit, all the gold coins in the hands of the public being withdrawn from circulation and demonetised.

This decision was taken when nothing yet had transpired about the Californian and Australian gold-fields. That only became known to the world a couple of years later; nothing, therefore, can be more erroneous than the assertion, often made, that the final adoption of the silver standard as basis of the monetary system of the Netherlands originated in the fear of a probable fall in the value of gold. The greater convenience of silver for domestic purposes was the principal motive for a reform which at that time perfectly answered the purpose.

The recoinage of the old silver coins being completed in 1849, a beginning was made in the following year by withdrawing the gold ten and five guilder pieces from circulation. Of these g. 172 millions (£14,333,300) had been coined and delivered to the public, but scarcely one-third of that amount, say g. 50 millions (£4,166,600) was presented for exchange against the state notes *muntbiljetten*). These notes were intended to be issued as a temporary medium of exchange only, but as the public became accustomed to them they proved so convenient that up to Oct. 1, 1904, they formed part of the currency of the country to a limited extent—varying between 10 millions (£833,300) originally and later 15 millions (£1,250,000).

All the gold coins received from the public were sold on government account at a loss of 1 million of guilders (£83,300), and altogether the reform of the currency, including the recoinage of the old silver money, and the demonetisation of the former gold coin, has been effected at a cost of about 10 millions (£833,300).

Since that date, 1847, the state of the currency became most satisfactory in every respect, and certainly no new reform would have been thought of if the monetary policy of the neighbouring countries had remained unaltered. But in 1872 the rulers of Germany deemed it advisable to introduce gold as the standard of the newly-constituted Empire, and it soon became evident that Holland could not remain indifferent to the intended reform of the German currency.

In October 1872, therefore, the Dutch government appointed a special commission to consider the subject and to advise as to the measures necessary in the interests of the country, and in December the commission re-

ported that it would be impossible for Holland to retain the silver standard established by the Act of November 1847, were all her neighbours to adopt gold as their standard of value. According to their views the most desirable solution of the question for Europe in general would be the adoption by the leading monetary powers of the double standard—admitting the free coinage of both gold and silver as legal tender at the same fixed ratio of value. They considered that a great stability of value for both metals would be the result of the compensatory action of that system, if introduced throughout the whole of Europe; that Holland alone would be powerless in the matter, and therefore that it would be indispensable for Holland to adopt the single gold standard should Germany decide upon that line of action, and that, in the meantime, without abrogating the law of 1847, the further coinage of silver on private account should at once be restricted or stopped altogether.

In conformity with the recommendation of the commission, the closing of the Utrecht mint for private coinage of silver was ordered by the law of 21st May 1873, and on Germany establishing the gold standard by the law of 9th July 1873, a bill was submitted to the states general, proposing the introduction of a legal tender currency of ten and five guilder pieces in gold, and the withdrawal from circulation of the silver standard coins issued under the currency regulations of 1847. The bill, however, was rejected; matters remained as they were until the middle of the year 1875, when, according to the law of 6th June, the mint was opened to the public for the coinage of ten guilder pieces of 6·048 grammes fine gold, to be legal tender concurrently with the silver guilder, the further coinage of which remained prohibited.

Thus the system of the *étalon boiteux* was introduced in the Netherlands, and, though it is of course open to the greatest objections, it must be acknowledged that, up to this moment, it has caused no serious inconvenience or mischief whatever. As a rule, the balance of trade is in favour of Holland, and bullion accordingly flows in freely. But occasionally the tide turns, as was the case in 1882, when a strong demand for export set in and the bank's stock of gold, which about the middle of 1880 had amounted to 80,000,000 of guilders (£6,666,600), decreased to below 5,000,000 (£416,600). The defect of the system then became evident. If once the gold stock of the country were exhausted, silver would become the regulator of the currency without any other limit to the depreciation of the currency and a corresponding rise in the foreign exchanges than the price of bar silver in the London market.

To protect the general interests of the country against the serious dangers eventually certain to result from such an unsettled state of affairs, a bill was passed (Act of 27th April 1884) empowering the government, as soon as the state of the currency should render it necessary, to withdraw from circulation, and to sell in the open market, silver coin to the amount of 25,000,000 of guilders (£2,083,300, at 12 gs. = £1) and to buy gold with the proceeds. Up to this moment, however (February 1911) there has never been any need to put this measure—which in the full sense of the term may be considered as the safety valve of the present currency system of Holland—into force. The law of 1884 is the unequivocal acknowledgment of the principle that the state is responsible for the maintenance of the gold value of the silver currency, and that it is one of the first duties of every government that has imposed a standard of value upon its subjects to take every reasonable precaution in its power to prevent that standard from fluctuating.

The currency system which has now been in force in Holland for about forty years, though defective in principle, has fully answered the requirements of the country, and it may remain unaltered for many years more unless it breaks down through the immense profit to be made by unscrupulous persons in manufacturing illicit coins of exactly the same weight and standard as the legal ones. But if this becomes the case, it will not only be Holland but nearly the whole continent that will have to face a difficulty of the greatest magnitude, the solution of which may make an international understanding with respect to money matters more urgent than ever.

Having thus described the system of currency in force in Holland, we will now turn to that of her Indian possessions.

In Dutch India the state of the currency was for many years even worse than it was in the mother country before the reform of 1847 was effected, and even the government itself was instrumental in wilfully perverting the currency of the colony.

The erroneous idea prevailed that the wants of the native population were on too limited a scale to require the precious metals for a general medium of exchange, and that it was in the interest of "the good people of these countries to increase the circulation of copper coin as much as possible" (*Decree of the Governor-General of Dutch India*, of 25th June 1818). Hence the government continued for years to effect the bulk of its payments in copper money, the so-called doits (*duiten*), which were imported in large quantities from Holland with the unavoidable result that all the good money formerly issued was driven out of the country. Silver was still the legal standard, and the silver guilder the unit of account, but virtually only copper remained as the general circulating medium for the whole community. A general depreciation of the currency was the natural consequence of this

state of affairs, a loss of 25 to 30 per cent having to be incurred on every remittance to Holland or elsewhere.

The colony suffered severely for many years under this miserable and scandalous condition of the currency. At last the government became aware that measures of a most stringent character ought to be taken to resettle currency matters on a satisfactory basis. By the law of 1st May 1854 the monetary system of the mother country, as regulated by the law of 1847, was introduced in Dutch India, and since that time nothing has been left undone by the authorities to secure the colony the benefit of a thoroughly efficient currency. For some consecutive years large shipments of silver coin from Holland to Java were made on government account, between 1854 and 1860, 90 millions of guilders (£7,500,000). Everywhere an opportunity was offered to exchange silver for the circulating copper money, and thus a long-wished-for reform was effected at a cost to the state of about 20 millions of guilders (£1,666,600).

Ever since that date the condition of the currency in Dutch India has been as satisfactory, nay as perfect, as in the mother country itself; even the late silver crisis leaving it altogether unaffected in consequence of the measures taken by the government to keep the currency at the standard value by closing the Utrecht mint, not only for the home, but also for the colonial coinage. Having no mint of its own, Dutch India has always been supplied with the money required for circulation by specie imports from Holland, the standard coin being exactly identical, and the stock of silver legal tender money available in Holland has till now been more than sufficient to meet the requirements of the circulation of the colony.

Thus a very close link exists between the currency of Dutch India and that of Holland. At first it was thought that silver might remain the standard in the eastern possessions of the kingdom, whatever reform might be introduced in the monetary system of the mother country; but gradually the conviction prevailed that, equally with the people of Holland, the Indian subjects were entitled to protection from the difficulties in which the action of a depreciating currency must necessarily involve them, and to remove all uncertainty as to the standard of value in the colony the law of 28th March 1877 decided that gold ten guilder pieces should from that date be legal tender in Dutch India,—thus establishing the monetary system of the colony on exactly the same basis as in Holland.

Meanwhile no gold whatever is to be found in circulation in Dutch India; but the lack of gold has never caused any inconvenience, and is in fact of no consequence so long as the circulating silver money fetches the full value of gold for payments in Holland. More than once Dutch India has had to face an unfavourable balance of trade, making the export of specie unavoidable (Table A), but the rate of exchange never exceeded the bullion point of gold (see GOLD POINTS IN FOREIGN EXCHANGES), since silver could always be used as a remittance to Holland in order to effect payments there, or to purchase sterling bills in Amsterdam for payments in England.

Table A.

Imports and Exports of Silver Coin from and to Holland.

(The guilder converted as 12=£1.)

Years.	Government account.		Private account.	
	Imports.	Exports.	Imports.	Exports.
	£	£	£	£
1888	—	—	724,166	—
1889	666,666	—	792,500	—
1890	333,333	—	219,166	—
1891	83,333	—	—	804,166
1892	166,666	—	345,667	733,333
1893	83,333	—	—	—
1894	83,333	—	332	—
1895	—	—	—	—
1896	51,250	—	4,542	—
1897	—	—	—	—
1898	133,333	—	—	300
1899	—	—	675,600	—
1900	198,750	—	—	—
1901	176,666	—	—	750,154
1902	—	—	12,022	250,000
1903	83,333	—	—	—
1904	91,667	—	—	—
1905	350,000	—	1,479	—
1906	375,000	—	83,333	—
1907	583,333	—	4,167	—
1908	—	—	—	—

Table B.

Batavia Rates of Exchange for Bank Bills.

Years.	Amsterdam six months' date. (Par=100)			London six months' sight. (Par=g. 12)		
	Lowest.	Highest.	Average.	Highest.	Lowest.	Average.
1888	103	101⅝	102 3/16	11·85	11·675	11·75
1889	102½	100½	101⅛	11·975	11·70	11·825
1890	102	99½	100⅜	12·05	11·80	11·925
1891	101	99½	100⅜	12·05	11·925	11·975
1892	101½	99¾	100⅝	12·10	11·90	12·
1893	102¼	100	101⅛	12·05	11·825	11·94
1894	101¼	100	100⅜	12·05	11·90	11·975
1895	100⅜	100	100 1/16	12·125	12·025	12·075
1896	101¼	100	100¼	12·15	12·025	12·09
1897	101½	100½	101	12·06	11·94	12·
1898	101½	100½	101	12·	11·90	11·95
1899	102¼	100⅜	101⅛	11·95	11·80	11·875
1900	102¼	101⅛	102 1/16	11·86	11·79	11·825
1901	101⅝	100¼	101 1/16	12·04	11·84	11·94
1902	101½	100⅜	100⅛	12·075	11·925	12·
1903	101¾	100⅜	101 1/16	12·	11·875	11·94
1904	101½	100½	101	11·96	11·91	11·94
1905	101¾	101	101⅜	11·925	11·85	11·89
1906	102⅛	101⅜	102 1/16	11·90	11·775	11·84
1907	102⅛	102⅛	102¼	11·825	11·675	11·75
1908	102½	101½	102⅜	11·94	11·725	11·83

In consequence rates of exchange at Batavia—the financial centre of Dutch India—have maintained a most remarkable steadiness during the last forty years, as shown in table B, see page 775, to explain which it may be added that the way of quoting the rate of bills drawn on Amsterdam is exactly the reverse of the quotations for sterling paper. For the latter the Dutch Indian currency is the fluctuating term, the quotation consisting of a varying number of guilders and cents to be paid for the pound sterling. In the exchange between Batavia and Amsterdam, on the other hand, the latter place gives the "uncertain" a quotation of 101, meaning that g. 100 Dutch Indian currency gives claim to g. 101 Netherlands currency. Thus it is obvious that a rise in the quotation of bills on Amsterdam must correspond to a decline in sterling quotations. [See EXCHANGE, FOREIGN, practical working of.]

During the last forty years in drawing from Java the extreme rates for Dutch bills have been 99¼ and 104½, and for English bills g. 12·15 and g. 11·375, thus showing a fluctuation of only 5¼ per cent for the former, and 7 per cent for the latter bills. Since 1875, when the great fall in the price of bar silver set in, rates have not fluctuated more than 2½ or 3 per cent. Thus Dutch India has been spared the disturbance in money and exchange matters which has caused so much inconvenience and loss in British India.

By the law of December 31, 1903, renewing the charter of the Netherlands bank, power was granted it to issue notes of 10 guilders (16s. 8d.), and simultaneously the state notes were withdrawn from circulation. Since then the regulation of the fiduciary currency of Holland has remained in the hands of the bank under the regulations ordered by law.

[But the fact is not to be overlooked that the whole structure of the currency of Dutch India must collapse in case Holland is forced by circumstances to complete its monetary reform by the demonetisation of the silver actually circulating as full legal tender money. Then the colony would be obliged to follow, and it is therefore not at all impossible that at some future period even the Eastern Archipelago may appear in the market for the sale of silver and the purchase of gold, unless it may still be practicable to arrive at an international understanding about the free coinage of silver as proposed originally in the report of the Dutch currency commission of 1872.] N.P.V.D.B.

[Ratio of silver to gold in Holland, taking mint charges into account, 15·625 to 1.]

EXCHANGE BETWEEN GREAT BRITAIN AND BRITISH INDIA.—The drop in the value of silver, commencing after 1867 (see LATIN UNION), compelled the government of British India to make in 1893 an arrangement for its remittances between India and London, similar in many respects to that in existence between Holland and the Dutch Indies (see EXCHANGE BETWEEN HOLLAND AND DUTCH INDIA). The rate at which council bills were issued in London was separated from the price of silver. In order to effect this, the coinage of rupees in India on private account was suspended, with a view to the introduction of a gold standard. The Indian government had been anxious that this step should be taken; but the home government desired that a thorough examination into the whole matter should be previously made. A departmental committee was appointed, consisting of Lord Herschell, afterwards lord chancellor, chairman, other members being Mr. Leonard, now Lord, Courtney, Sir Thomas afterwards Lord, Farrer, Sir Reginald, now Lord, Welby of the treasury, Mr. Arthur Godley, now Lord Kilbracken, of the India office, Sir Richard Strachey, and the late Mr. B. W. Currie, who was a member of the council of India and of the firm of Glyn and Co. The committee considered the proposals of the Indian government, which aimed at fixing the exchange at the rate of 1s. 6d. per rupee. This rate the committee did not adopt; the market rate being at the time (June 1893) approximating to 1s. 2d. for the rupee. The general conclusions of the committee, in their report to the secretary of state for India, Lord Kimberley, were that "while conscious of the gravity of the suggestion, we cannot, in view of the serious evils with which the government of India may at any time be confronted if matters are left as they are, advise your lordship to over-rule the proposal for the closing of the mints and the adoption of a gold standard, which that government, with their responsibility and deep interest in the success of the measures suggested, have submitted to you. But we consider that the following modification of these proposals are advisable:—The closing of the mints against the free coinage of silver should be accompanied by an announcement that though closed to the public, they will be used by the government for the coinage of rupees in exchange for gold, at a ratio to be then fixed, say 1s. 4d. per rupee; and that in the government treasuries gold will be received in satisfaction of public dues at the same ratio." The Indian government acted immediately on this recommendation, and an act was passed in the council at Calcutta (June 1893) carrying the report of the committee into effect, and fixing the rate at 1s. 4d.

The action of the government in 1893 was immediately followed by a rise in the selling rate of India council bills in London from about 1s. 2d. to 1s. 4d. for the rupee, and by a rather more than corresponding fall in the market price of silver. Suggestions have been made to bring the rate for council bills upwards to 1s. 6d., and ultimately to about 2s. for the rupee. It remains to be seen whether the Indian government will have sufficient control over the market for bills to enable it to carry

this into effect. Nor can the influence on the coinage legislation of other countries—as for example on the United States of America—or on the rate of exchange in the trade with other silver-using countries be stated at present, or the effect which may be produced on the trade of British India, or on the condition of the people. One result, if the measure continues to operate, will be the formation of the largest "token" circulation of coins that has been known in modern times, as the rupee will circulate at the rate which the government fixes it at relatively to gold, irrespective of the gold price of uncoined silver; while for the present, at all events, there is no gold coin current to represent the rupee. A further result will be the entire separation of the rate for the bills on India from the market value of the ordinary circulation of the country. The council bills are, as was desired, issued at the rate fixed for the time by the Indian government. The arrangements, in so far as they are based on an authoritative rate fixed by a government for monetary transactions, and a fixed ratio between gold and silver are similar in some points to those on which bi-metallic systems have been founded; but while this is the case, the leading principle of bi-metallism, namely, the power of the subject to have his bar silver or bar gold coined into money and to be able to pay his debts with either metal so coined, is entirely absent. The success of the plan depends solely on the power which the Indian Council may be able to exert over the London market. The Indian Coinage Acts of 1899 and 1906 enacted that "gold coins, whether coined at Her Majesty's Royal Mint in England, or at any mint established in pursuance of a proclamation of Her Majesty as a branch of Her Majesty's Royal Mint, shall be a legal tender in payment or on account at the rate of fifteen rupees for one sovereign." No such gold coins have yet (1914) been struck at any mint in India.

No reference has been made in this statement to other points, many of great weight, connected with this question, such as the possibility of private coinage — in the vast region of India, much of which is not under the control of our government—of spurious silver rupees equally valuable with those issued by authority, an operation which would be very profitable to the coiner (this, however, up to the present, 1914, does not appear to have been carried on to any very large extent)—of the effect on the Indian cultivator of the soil, who will now be deprived of the resource which silver, in the form of ornaments, has been to him in time of famine—or of the result on the trade of other silver-using countries.

The measure was designed to prevent the rate from dropping lower, but it will have the effect of stereotyping the loss entailed by the fall in exchange both on the government and on private individuals at the point at present fixed.

[See *Report of the Committee appointed to inquire into the Indian Currency*, 1893.—*Correspondence between the Government of India and the Secretary of State*, 1893. Comp. *Econ. Journal*, Sept. 1893.]

[Ratio of silver to gold in India, with rupee at 1s. 4d., taking mint charge into acct., 22·37 to 1.]

EXCHANGE, INTERNAL. One factor in the calculation of all exchanges is the cost of the transmission of bullion, including therein the cost of actual transport and the risk and trouble involved. In the foreign exchanges these charges are in a general way concealed by the fact that the two sides are in terms of different currencies; and they are modified by the competition of bills of exchange, according to the supply and demand of which will be the proportion of such charges which a remitter will have to bear. The same expenses attach to the settlement of transactions between different parts of the same country, but they are rendered more apparent by being expressed in the form of a commission or premium. They are also usually more uniform, as they are not affected by momentary competition, but are governed by the condition of the banking system, tending gradually to diminish in proportion to the completeness of its development.

In this country the facilities for internal exchange are considerable, and its cost has been brought to a low point. The post-office system of money orders, and of postal notes and orders, furnishes the means of remitting small sums to almost every village, at a cost that has continually decreased as the facilities offered have increased. In the first quarter of the 19th century remittances could only be made to a few towns, and at a cost of about 2½ per cent. At the present time the number of points to, or from, which remittances may be made has risen to upwards of 10,000, whilst the cost may not much exceed one-half per cent. For larger sums remittances were formerly made by bankers' drafts, or bank post bills, the charges on which were defrayed partly by a direct commission, and partly by deferred payment. At the present time, by means of the country cheque clearing (see CLEARING SYSTEM), remittance may be made throughout the whole of England and Wales absolutely without cost, whilst for the collection of drafts other than cheques, and for all collections in Scotland and Ireland, the cost has been brought generally to about $\frac{1}{20}$ of 1 per cent. This result is greatly due to the spread of branch banking (see BANKS, ENGLAND AND WALES).

In the United States the development of the national banking system (see BANKS, NATIONAL, U.S.A.) has led to remarkable results in the same direction. This system was established in 1865, at which time the cost of southern and western exchange on New York was from 1 to

1½ per cent, and even for different parts of the state of New York it was ½ per cent. The difficulty of obtaining reliable remittances was even more serious than its cost, as the notes or drafts of banks in any state were frequently quite useless but a few miles beyond its borders. By 1890 the rates of commission or premium, on internal exchange, had so far declined that they ranged from 1 cent per $100 (1/100 of 1 per cent) in some small states, as Rhode Island and New Hampshire, up to 21 cents per $100 (1/5 of 1 per cent), in Nevada, Texas, and some other states. The influence of the Bank Act of 1913 on internal exchange remains to be seen.

In France the Bank of France, through its numerous branches, has long afforded considerable facilities for internal exchange, which have increased in recent years by the still more numerous branches of other banks. R. W. B.

EXCHANGE OF NOTES (in reference to the note circulation in Scotland). All the banks now (1914) carrying on business in Scotland are banks of issue. They are nine in number, and there is a stringent system maintained of exchange of notes once a day in every town in which there are two or more banks. In the case of a bank holding the notes of another bank not represented in its town, these are remitted to the issuing banks at short intervals. On Saturdays there is an afternoon as well as a morning exchange, so that the returns of circulation made at the close of business on Saturdays, as required by the terms of the Bank Act of 1845, exhibit the amount of notes then in active circulation, *i.e.* in the pockets and tills of the people. No bank ever issues the notes of any one of the other banks.

The notes are, by the system described above, "cleared" to a great extent independently of the ordinary settlement of drafts and bills between the banks. The system is a very convenient one, and saves the banks concerned a great deal of labour.

All clearing-house balances, other than those arising at the Edinburgh clearing-house, are settled by drafts on Edinburgh, which pass through the clearing-house there, and the balances of the Edinburgh clearing-house are settled bi-weekly by transfers of cash made in London four days later. Interest at 3 per cent is paid by the debtor banks on balances until the date of final settlement in London.

EXCHANGE BROKER. Unlike the bill-broker (see BILL-BROKING), who in most cases is really a *dealer* in bills, which he buys and sells for his own account, the exchange or *foreign bill* broker is strictly what the title of his calling implies, namely, an intermediary or negotiator between the buyers and sellers of bills of exchange drawn on foreign countries.

Such bills fall into two classes; those drawn from the provinces, and those drawn from, or held in, London. As regards the former, all practically pass through the country banker into the hands of his London agent for negotiation, and, as the latter does not attend 'Change, they are, without exception, sold through brokers. In the case, however, of London-drawn paper, or of such as is remitted to London houses, the seller is quite at liberty, if he so chooses, to go on 'Change and save the brokerage by offering the bill for sale himself; but he usually finds it to his advantage to employ a skilled agent.

The exchange broker must be sufficiently familiar with foreign law and custom to be able to point out and explain any irregularity of form, stamp, or endorsement, etc., in the bills that pass through his hands. He ought also to be competent, besides knowing the present state of the exchange, to form an opinion as to its probable course, in order to advise his client, if need be, when best to buy or sell. He is also expected, when executing a buying order, to protect his client's interest by exercising a due regard to the financial and moral standing of the parties to the bill.

On concluding a bargain, the broker makes it legally binding by passing a contract note to both parties, giving particulars of the bill and specifying the rate at which it has been sold. In the buyer's copy he also fills in the name of the party who has to deliver, and in the seller's that of the party who has to receive and pay. Payment, it may be added, is not effected through the broker, as in stock exchange transactions, but the principals settle direct on the following day. The charge for brokerage is nominally one per mille (2s. per cent), but is subject to modification. Brokerage accounts are rendered once a year.

The growing tendency to effect settlements by bill on London, instead of by bills drawn from England on abroad, is strikingly illustrated by the fact that, notwithstanding the enormous increase in our foreign trade in the last half-century, the number of exchange brokers has only risen, according to the Post-Office Directory, from 13 in 1841 to 15 in 1911, as against an increase during that period in the number of London stock brokers from 343 to upwards of 5000, with over 2300 clerks besides. G. C.

EXCHANGER, ROYAL. The chief functions of the king's or royal exchanger were as follows: to buy bullion for coin save where private mints existed, to exchange current coin of one metal or denomination for that of others, and to exchange foreign and English coins.

In the reign of Henry I. we find this office and that of moneyer united and vested in one person. But this union did not continue. Succeeding kings separated the office of exchanger and developed its constitution. Thus Edward I. had tables of Exchange set up in various places, as York, Dover, Canterbury, etc. In addition to the other and more ordinary ser-

vices which he performed, the exchanger and his subordinates were entrusted with the important duty of so discharging his office that the export of precious metals from the country might be prevented. He continued a royal functionary and in discharge of his duties till the reign of Henry VIII. Then the complaints of the goldsmiths and the advice of Sir Thomas Gresham were listened to, and in 1539 the office of the royal exchanger was abrogated on the ground that its charges and action impeded traffic. Despite a nominal restoration in 1546, the previous date may be regarded as marking the termination of this restraint on the exchange. Statesmen and theorists were, however, very much divided as to the expediency of this action, and the protests against the extinction of the office proceed from well-known men, as for instance, Sir Robert Cotton.

Its reconstitution was mooted at the very beginning of the reign of Charles I. (in 1626). The goldsmiths were heard in opposition in the privy council, but did not prevail. On 25th May 1627 the revival of the exchanger was announced, and the king appointed "Henry, Earl of Holland, and his deputies, to have the office of our changes, exchanges, and outchanges, whatsoever, in England, Wales, and Ireland," for a period of thirty-one years. The goldsmiths petitioned, and the House of Commons protested against this reconstituted office. The Earl of Holland offering to submit his office to the judgment of the latter body, a debate took place, and it was agreed that it was a "grievance." No steps seem to have been taken to exercise any jurisdiction, and no attempt was made subsequently to revive this ancient office.

[Ruding's *Annals of the Coinage.*—Macpherson, *Annals of Commerce.*—Rymer, *Fœdera;* and MSS. authorities.] E. C. K. G.

EXCHEQUER.

Exchequer, Early History of, p. 779; Exchequer, present constitution of, p. 781; Exchequer, Scotland, p. 784; Exchequer Bill, p. 784; Exchequer Bill, History of, p. 784; Exchequer Bond, p. 785; Exchequer Bond, History of, p. 785; Exchequer, Closing of, 1672, p. 786.

EXCHEQUER, EARLY HISTORY OF. The Exchequer, *i.e.* the department of government which superintended and managed the king's revenues, and into which all dues were paid, appears as an organised part of the state system in Norman times. In Early English times there seems to have been a treasury, sometimes at Winchester, sometimes at Westminster, while a hoard was kept in the king's chamber, and local treasuries were found in some provincial towns (Hall, *Antiquities of the Exchequer*, p. 3), but there are no traces of a court of account so early. Richard, Bishop of London, the treasurer, son of Bishop Nigel of Ely, and our chief authority for the early history of the exchequer, writing in 1178 (Liebermann, p. 11), states that it dates from the Norman Conquest, the arrangement being taken from the exchequer across the seas (*Dialogus de Scaccario*, i. iv.). Though this fact of a Norman origin for the English exchequer cannot be proved, it is probable that both came into existence about the same time; even if entirely independent, the English exchequer is certainly not much older than the Norman; while on the other hand, some of its peculiarities, such as the "blanch farm," show that the system was not borrowed in its entirety from Normandy.

In Henry I.'s time it is found as a distinctly organised department and as a court of law under the name "scaccarium," a name derived from the chequered cloth which covered the table at which the accounts were made up. All the financial business of the crown was carried on at the exchequer, and as in early times the regulation of finance and the administration of justice were intimately connected, much judicial work fell for a while under its control, until, with the elaboration of the judicial system, new courts arose, and until its authority was restrained by Magna Carta, by the statute of Rutland (12 Edw. I.) and by other statutes, to cases which directly affected the revenue. This close connection between justice and finance is indicated by the fact that the officials who sat as *justitiarii* in the curia regis, the supreme judicial court, sat also in the exchequer as *barones scaccarii*. These were the great officers of the household and others specially named by the king, presided over by the king or by his representative, the chief justiciar, until the final disappearance of that official in Henry III.'s reign, when the treasurer, always an important functionary, took the foremost place. The treasurer, who was assisted in the performance of his duties by the chamberlains, had indeed the superintendence of every department, and was responsible for the compilation of the great roll, the annual record of the crown dues, while he also gave directions for the execution of the royal writs. The chancellor, the representative of the equitable jurisdiction, acted as nominal guardian of the great seal, and also as a check upon the treasurer, whose roll was copied by one of the chancellor's clerks. The constable, with clerical assistance, made payments to the royal officers and others upon receipt of the king's writ, for without such a warrant the issue of money was strictly forbidden. To cut the tallies (see TALLIES), used as receipts, a cutter of the tallies was employed. Under these more important dignitaries were a large body of officials, sitting in the lower chamber, who prepared the summonses and other business, and acted as fiscal experts. Some of these offices were held in fee, and mention is found of a woman hold

ing office as chamberlain and acting by deputy (Hall, p. 82).

Full sessions of the exchequer were held at Easter and at Michaelmas, generally at Westminster, although instances of its session elsewhere are found as late as the reign of Edward II. (Madox, ii. p. 7). Other sessions were held during the Hilary and Trinity terms, and whenever it was deemed necessary, not excepting Sunday (Thomas, p. 7).

Manifold were the duties of the officials in connection with the revenue; not only did they receive payments from the sheriffs and others responsible for debts to the crown after careful examination of the accounts, but they also directed payments to be made to meet the royal requirements, and met administrative expenses of all kinds.

Business was carried on in two departments.

(1) The upper chamber, known as the exchequer of account (*scaccarium majus*), where the reports of the sheriffs and of others were received, and where all legal negotiations were carried on.

(2) The lower chamber or exchequer of receipt (*scaccarium inferius*) where the money was paid down, weighed, and tested, and from whence it was issued when necessary. The proceedings in the case of a sheriff, the most important of all accountants, may be taken as typical of the method adopted in transactions with the customers, escheators, bailiffs, and others responsible for the collection of the revenue.

At Easter the sheriff having received a summons and a statement of the items for which he had to account, appeared in person at the exchequer, unless excused for special reasons, when an attorney of suitable rank might act as his representative. The view of his account was then taken, and a proffer was made by him, being generally an instalment of half the total amount for which he was responsible. In return he received a receipt, known as a *tally*, the counterfoil of which was retained at the exchequer. When summoned to the Michaelmas session, the sheriff was required to answer for the full annual dues "in money or in tallies"; he then presented the tally or the voucher which represented such payments or allowances as might already have been made, together with the remainder still due in cash, and received full quittance of his obligations. A simple expedient for balancing the liabilities and the actual payments of the sheriff was devised by means of counters placed upon the squares of the chequered table, those on the one side of the table representing the value of the tallies, warrants, and specie presented by the sheriff, and those on the other the amount for which he was liable, so that it was easy at a glance to see whether the sheriff had met his obligations or not. In Tudor times "pen and ink dots" took the place of counters, and are found in use for the last time in 1676 (Hall, *Antiquities of the Exchequer*, p. 131).

Depreciation of the coinage through wear and the possibility of fraud led in early times to the adoption of precautionary measures. Thus when money was paid by tale a payment of sixpence on every pound was added to make good any possible deficiency; this was found to be inadequate, and in place of such a payment *ad scalam*, a payment *per pensum* was demanded, by which any deficiency in the actual weight had to be made up, or a composition of one shilling in the pound was exacted. In some cases the coin was submitted to a smelting test; this was generally done with the farm of the county, which was said to be blanched or dealbated, when such a test or a composition in lieu of it had been accepted. A regular staff of officials was employed in the exchequer of receipt to see that *real combustion*, *i.e.* the actual testing of bullion, or *nominal combustion*, *i.e.* the additional payment offered as a substitute, was not evaded by the king's debtors (see ASSAY).

Among the important records bearing on the work of this department, and carefully guarded by successive generations of officials, in hampers and chests, were the Domesday book, the most ancient record of the liabilities of crown tenants, the Red and Black Books of the exchequer, and other similar compilations; the most important for centuries was the great roll of the exchequer, commonly known as the Pipe Roll or *Rotulus Annalis*, the official register of all debts due to the crown arranged under the heads of counties, drawn up annually under the superintendence of the treasurer, and which served as the supreme authority by which the sheriffs and other accountants were judged. The first of these rolls still extant is that for 31 Henry I. (1130), but from the second year of Henry II. the series is complete. A duplicate of this roll was prepared for the chancellor, who closely checked any error on the part of the treasurer, while at the date of the compilation of the dialogus a third roll was transcribed for the king (*Dialogus*, I. vi.). In later times with the expansion of royal revenue a number of other rolls dealing with special parts of it became necessary (Thomas, *Ancient Exchequer*, p. 68). As attendance on the king and their duties in the various courts prevented the great officials from regular attendance at the exchequer, and as the sources from which the revenue was derived changed, various new officers were appointed to meet the demands in different directions. Thus as the chancellor and his subordinates became engrossed by the business of the chancery, their places were taken by the comptroller of the pipe and the chancellor of the exchequer (Thomas, p. 100), the latter official being often mentioned from the reign of Henry III. onwards, when the remembrancer

is also first heard of, keeping the memoranda roll, upon which were entered points left for consideration until the close of the audit, and acting in the capacity of solicitor to the treasury (see PIPE ROLLS). Towards the end of Elizabeth's reign the number of officials reached its highest point, and it is also noticeable as the time when the lord high treasurer, as he was now called, began to act less frequently in person at the exchequer and more by means of written instructions, and this gradually led to a new system for the conduct of business (Thomas, p. 21). Upon the death of the Earl of Salisbury in 1612 the treasury was for the first time put in commission, and since verbal orders could not be accepted at the exchequer from several persons, written instructions became a necessity, and led to the use of treasury warrants, which again paved the way for the modern department of the treasury. There is evidence that the lord high treasurer still acted in person until the removal of the exchequer to Oxford in 1643. Finance under the commonwealth was managed by committees of revenue until Cromwell revived the exchequer in 1654, and put the treasury in commission, which has been its normal condition since that time. During the Great Fire of 1666 the exchequer was moved for a while to Nonsuch (Hall, 76). In the course of George III.'s reign many of the old offices were gradually swept away, until in 1833 the ancient account and receipt departments of the exchequer were entirely abolished (3 & 4 Will. IV. c. 99; and 4 Will. IV. c. 15), the office of king's remembrancer being the sole relic to-day of the early system, for the work of the exchequer is now undertaken by the modern departments of the paymaster-general and the treasury, while the Bank of England has taken the place of the old exchequer of receipt. See BUDGET; EXCHEQUER, PRESENT CONSTITUTION OF; JEWS, ECONOMIC INFLUENCE OF (for exchequer of the Jews); PIPE ROLLS; TALLIES; TREASURY.

[Gneist, R., *History of the English Constitution*, translated by P. A. Ashworth (1886).—Hall, H., *Antiquities and Curiosities of the Exchequer* (1891) and *Introduction in Pipe Roll Society's Publications*, iii. (1884); *Court Life under the Plantagenets* (1890). He gives a valuable list of manuscript and printed authorities on the subject of the exchequer in *Antiquities*, p. 224.—Henderson, E., *Historical Documents of the Middle Ages* (1892), gives a translation of the *Dialogus de Scaccario*, the Latin text of which is given by Madox and by Bp. Stubbs in his *Select Charters illustrative of English History*.—Liebermann, F., *Einleitung in den Dialogus de Scaccario* (1875).—Madox, T., *History and Antiquities of the Exchequer*.—Stubbs, W., *Constitutional History of England* (1875).—Thomas, F. S., *The Ancient Exchequer of England* (1848).] E. A. M.

EXCHEQUER, PRESENT CONSTITUTION OF. The Exchequer is the national purse or receptacle into which (*a*) all the public revenues are paid, and out of which (*b*) all public expenditure is defrayed. The moneys paid into the exchequer constitute in the aggregate the consolidated fund of the United Kingdom (see CONSOLIDATED FUND), of which the local situation or receptacle is in practice at the Banks of England and Ireland, where all such moneys are carried to a general account, operated upon by the commissioners of the treasury, and known as the "Consolidated Fund Account," or Exchequer Account.

a. The following is the machinery by which the exchequer is supplied, viz.:

In the fiscal system of the United Kingdom the financial year does not coincide with the calendar year, but is reckoned from the 1st of April to the 31st of March. Towards the close of one financial year or beginning of the next—that is to say, in the month of March or April—the chancellor of the exchequer lays before the House of Commons his budget (see BUDGET), which is a statement of the revenue and expenditure of the outgoing, and the estimated revenue and expenditure of the incoming, year. He first estimates the revenue of the incoming year on the assumption that the existing scheme of taxation will be continued unaltered by parliament. If he considers that on this basis the revenue of the year will exceed the expenditure, he generally proposes to abolish or reduce certain taxes; if the contrary, to raise, increase, or extend them. It is not necessary that the scheme of the chancellor of the exchequer, so far as the revenue which he anticipates is founded upon the existing basis of taxation, should be sanctioned as a whole by parliament; for, in the absence of an enactment to the contrary, all taxes and imposts go on from year to year without express legislative renewal, except the tea-duty and the income-tax. If, therefore, the House of Commons approves of the budget proposals, all that is necessary, in the first instance, is that it should, by resolutions passed in committee of ways and means, sanction the levy of tea-duty and income-tax during the financial year, at the old rates, or at new rates proposed by the chancellor of the exchequer, as the case may be; and that it should also sanction by similar resolutions any changes which he proposes in other duties or taxes. These resolutions are subsequently confirmed, as soon as the exigencies of parliamentary business will allow, by acts of parliament prepared for the purpose, which are now called Finance Acts. At this stage the arrangements for supplying the exchequer with the necessary revenue during the financial year are formally complete. The commissioners of customs and excise and of inland revenue, acting under the directions of the commissioners of the treasury, levy the duties and taxes prescribed by statute; the post office continues from

year to year its profitable labours; and the moneys derived from these several sources are, together with the hereditary revenues of the crown, and certain other miscellaneous items, paid in by their collectors as they accrue to the exchequer account at the Banks of England and Ireland.

b. Such is the manner in which the exchequer is filled. It is now necessary to explain the procedure by which its treasures are disbursed. From the foregoing account it will be seen that the levying of the national revenue is completely under the control of parliament. The control of parliament over the national expenditure—or, in other words, over the disbursements of the exchequer—is no less, in fact if anything it is more complete. The expenditure of any given year is divided into two classes. 1. The first consists of charges, more or less permanent in their nature, which are authorised by act of parliament either for a given period or until the act authorising them has been repealed. These charges therefore do not form the subject of an annual vote of parliament, but are paid as they fall due under the authority of the act which grants them. They are called fixed charges on the CONSOLIDATED FUND (*q.v.*), and comprise the interest, sinking fund, and cost of management of the public debt; the civil list, or dotation of the crown; the allowances to members of the royal family; certain pensions granted for public services; the salaries of the judges; and of certain high officers whose independence is thought to be better guaranteed by permanent grant than by annual vote. In the finance accounts of the United Kingdom for 1912-13 the sums issued from the exchequer for fixed charges on the consolidated fund amounted to £24,500,000, or rather less than one-seventh of the total expenditure. In addition to those charges there were payments to local taxation accounts, etc., amounting to £9,653,000 assigned by various acts to local purposes. 2. The ordinary charges of the military, naval, and civil government, and of collecting the revenue, form the second class of public expenditure. They are annually granted by parliament, and as they are voted by the House of Commons in committee of supply, they are called the supply services (see SUPPLY, PARLIAMENTARY). The amount issued from the exchequer in 1912-13 on account of expenditure on the supply services is returned at £151,604,000, being nearly five-sixths of the total expenditure of the year.

Money to defray a fixed charge on the consolidated fund is taken out of the exchequer under the authority of the special act of parliament which fixes the charges. The following is the machinery by which money for supply services is obtained.

The government submits to the House of Commons estimates of the sums which it requires, under the several heads or denominations of service, known as votes (as the House of Commons votes them). Each of these votes is discussed at such length as the House thinks proper, and any item in a vote can be rejected, but the House cannot add a penny to a vote, it being a constitutional maxim that expenditure can only be voted on the recommendation of the crown. Nor has the House of Lords any share in the matter. It is a co-ordinate branch of the legislature; but the privilege of voting the money of the subject is exclusively reserved to the representative chamber.

Suppose now that the House of Commons has voted the proposed expenditure. This alone would not enable the government to act; for, although the exchequer is being daily filled with the produce of taxes, it cannot be availed of without further parliamentary authority for defraying the expenditure which the House of Commons has sanctioned.

The House of Commons alone criticises and sanctions the proposed expenditure, but the doors of the exchequer cannot be unlocked without the authority of an act of parliament. Accordingly, acts are passed from time to time, each parliamentary session, authorising certain sums to be taken out of the exchequer to defray expenditure sanctioned up to date. These acts are often referred to as "ways and means acts." Their parliamentary title is "consolidated fund acts," and the language in which they are couched is instructive, as summarising the procedure of parliamentary supply, viz.:—"Most Gracious Sovereign.—We, your Majesty's most dutiful and loyal subjects, the Commons of the United Kingdom of Great Britain and Ireland, in Parliament assembled, towards making good the supply which we have cheerfully granted to your Majesty in this Session of Parliament, have resolved to grant unto your Majesty the sums hereinafter mentioned, and do therefore most humbly beseech your Majesty that it may be enacted, and be it enacted by the King's Most Excellent Majesty, etc., etc." (Then follow, after the usual preamble of an act of parliament, provisions authorising the treasury to issue certain sums out of the exchequer.) Thus the House of Commons *grants* the money; but the three estates of the realm conjointly authorise, by statute, the taking of money out of the exchequer. In the parliamentary session of 1910 three such Consolidated Fund Acts were passed (10 Edw. 7, c. 4; 1 Geo. 5, c. 9; 10 Edw. 7 and 1 Geo. 5, c. 14). The last of these acts passed each session is called the "Appropriation Act"; it sets out in detail all the votes which the House of Commons has sanctioned in supply, and applies to them, and to them only, the required sums of money out of the exchequer, thus strengthening parliamentary control over administration by making it illegal for the executive to expend upon one service

money which has been voted for another. This practice of *appropriating the supplies*, as it is called, dates from the Revolution of 1688.

Thus it will be seen that the control of parliament over the exchequer is complete. A fixed charge on the consolidated fund can only be paid on the authority of a special act of parliament, and a supply service can only be paid after it has been voted by the House of Commons in committee of supply, and after the disbursement of the necessary funds has been authorised by a consolidated fund act or by a ways and means act. The practical security that these conditions are observed and that ministers do not take money from the exchequer for purposes which parliament has not approved is that money is only issued out of the exchequer with the permission of an independent officer appointed under the Exchequer and Audit Departments Act, 1866 (29 & 30 Vict. c. 39), and styled the comptroller and auditor-general, over whom the executive government has no control, and who guards the exchequer on behalf of parliament. Before any money can be issued from the exchequer the treasury has to requisition and obtain from that officer a credit or credits on the Exchequer accounts at the Bank of England and Bank of Ireland, and such credits are only granted if he has satisfied himself that the demand is for a service authorised by parliament. Then parliament provides against ministers obtaining money from the exchequer for a purpose which parliament has authorised, but spending it otherwise, by the fact that every department to which public money is issued is obliged, under the Exchequer and Audit Act (29 & 30 Vict. c. 39), to render an account of the disposal of such money to the officer above mentioned, the comptroller of the exchequer, etc.

It will here be proper to say a word as to the difference between the "committee of supply" and "committee of ways and means" in relation to public finance. In committee of supply the House of Commons determine how much money government shall be allowed to spend; in committee of ways and means it considers where the money thus authorised to spend is to come from. "The committee of supply considers what specific grants of money shall be voted as supplies demanded by the crown for the service of the current year, and explained by the estimates and accounts prepared by the executive government, and referred by the House to the committee. The committee of ways and means determines in what manner the necessary funds shall be raised to meet the grants which are voted by the committee of supply, and which are otherwise required for the public service. The former committee controls the public expenditure, the latter provides the public income. The one authorises the payment of money, the other sanctions the imposition of taxes and the application of public revenue not otherwise applicable to the service of the year" (May's *Parliamentary Practice*, p. 616, ed. 1879).

The grants which have been described are made by parliament to the crown, and the sovereign, by royal order, places them at the disposal of his finance department, the treasury. The treasury from time to time, as money is wanted, issues out of the exchequer to the accounts of the paymaster-general or the Revenue Departments, as the case may be, such sums as may be required to meet the expenditure of the various services.

Careful distinction must be drawn between the exchequer and the treasury. The exchequer is the national purse, the treasury is the finance department of the state, which controls the exchequer, on behalf of the executive government, subject to the check and audit of the comptroller and auditor-general acting on behalf of parliament. The treasury is governed by a board of commissioners, of whom the chancellor of the exchequer is one. The treasury, through the chancellor of the exchequer, moves parliament at the commencement of the financial year to provide the means of carrying on the government. It is to the account of the treasury, the exchequer account, that all public moneys are paid into the banks of England and Ireland, and it is the treasury again which when the supplies granted to the crown by parliament have been placed by the sovereign at the disposal of her finance department, the treasury, supervises and controls the expenditure of such supplies throughout every branch of the public service. The duties of the treasury, as the department responsible for the administration of the exchequer, are thus summarised by Mr. H. D. Traill in his *Central Government* (English Citizen Series, 1881), viz. :—

1. To provide the means of meeting the necessary yearly expenditure on the military, naval, and civil services of the nation.

2. To exercise a general control and supervision over the amount and details of that expenditure.

3. To revise and regulate the internal or domestic expenditure of the other public offices of the state, and generally to exercise such a superintendent authority over the financial management of such offices as is implied in these revisory and regulative powers.

4. To decide upon appeals from its own subordinate departments in all cases arising out of the receipt of revenue, and

5. To determine as to the remission of fines and forfeitures due to the crown.

The board of treasury consists of five commissioners, namely: the first commissioner or first lord of the treasury, an office which is generally held by the prime minister; the

chancellor of the exchequer; and three other commissioners, known as junior lords of the treasury. The financial powers of the treasury are in effect centred in the chancellor of the exchequer, who may therefore be described as the finance minister of the United Kingdom.

EXCHEQUER (SCOTLAND); originally a department or committee of the Scottish parliament, by the Treaty of Union, Art. 19, this court was to continue until a new revenue court should be established in Scotland. By 6 Anne c. 26, a new exchequer court was established in Scotland on the English model, the judges being the lord high treasurer of Great Britain, the lord chief baron, and four barons of exchequer. It was an attempt to establish a common judicatory for England and Scotland, and all members of the English or Scottish bars were entitled to plead before it, and the privileges of senators of the Scottish college of justice were conferred on the barons. It had exclusive jurisdiction over customs, excise, and other revenues of the crown, and all honours and estates accruing to the crown, and the gift of the office of tutor dative, or guardian appointed by the court. English forms of procedure were to be used. Other powers were the passing of sheriffs' accounts, superintending the administration of the sovereign's feudal superiorities, dues, and fines of crown vassals, etc. By 3 Will. IV. c. 13, all powers of this court bearing on revenue were transferred to commissioners of the treasury in London, but its legal jurisdiction was preserved. Other statutes modified and altered the court. Finally by the court of exchequer, Art. 1856 (19 & 20 Vict. c. 56) it was abolished as a separate court and all its former jurisdiction was transferred to the court of session, becoming the revenue department of that court. The English forms and terms were assimilated to those of the court of session, and one of the lords ordinary to be named by the crown was to act in exchequer causes.

[Clerk and Scrope's *Historical View of the Court of Exchequer in Scotland;* and Mackay's *Practice*, vol. i. 43, 192.] J. W. B. I.

EXCHEQUER BILL. This is one of the securities on which the British exchequer formerly raised money for temporary purposes. (See EXCHEQUER BILL, HISTORY OF.) The bills bore a fixed rate of interest, not above 5½ or below 2 per cent, and were a favourite security with bankers, merchants, and others, who required a good security for a short period.

EXCHEQUER BILL, HISTORY OF. Exchequer bills were a form of security on which the government, under the authority of parliament, might borrow money for the service of the state. They have been in use since the year 1696, and had their origin in the scarcity of the circulating medium during the great recoinage at that time. Their invention as a substitute for "money" is attributed to Charles Montague, the chancellor of the exchequer in William the Third's reign, and may be said to have been the first introduction of a paper currency organised by the state.

The first exchequer bills were issued under the authority of 7 Will. III. c. 31, and were to "pass in payments from any person or persons to any other person or persons that shall be willing to accept and take the same." They were made out in sums as low as £5 and £10, and were to bear a daily interest not exceeding 3d. per cent per diem. The object of the inventor of these bills, however, was not realised. They were received with so little favour that, out of £1,500,000 authorised to be issued, only about £160,000 got into circulation; an amount too limited to give any relief to the monetary difficulties of the time. In 1697, under Acts 8 and 9 Will. III. c. 8 and c. 20, their use was considerably extended by making them pass in payment of all taxes, duties, etc., and "in all payments at the exchequer due to the king." Originally exchequer bills were, like the ordinary loans at the exchequer, charged upon the produce of certain specified duties imposed or renewed by the act authorising the issue of the bills. As, however, it frequently happened that the duties so appropriated proved insufficient to pay off the loans raised thereon, it subsequently became the practice to make the bills payable out of the general supplies granted by parliament year by year. This practice did not extend to the bills charged on the annual malt duty and land-tax, which duties continued to be specially appropriated, although they often were deficient and had to be made good out of the supplies of the following year. In 1763-64 exchequer bills entirely superseded the old form of loans at the exchequer, and for a period of ninety years, *i.e.* until 1853, continued with one or two exceptions to be the only form of temporary security on which money was borrowed either to meet the ordinary service grants of parliament or for loans granted for purposes of a local character. Amongst the latter may be mentioned the building of churches, public works, poor relief, Irish tithes, Shannon navigation, relief of West India proprietors, etc. The largest amount of exchequer bills issued in any one year was in 1813, when it reached the total of over £54,000,000. The amount of exchequer bills in circulation has at various times been reduced by a process called "funding," *i.e.* by the creation of "funded debt" in lieu thereof. The usual course was to offer government stock to the public at a given price to be subscribed for either in exchequer bills, or money, or both. The bills so subscribed were cancelled, and the money subscribed was applied in paying off other exchequer bills on their maturity. In

cases where the bills required to be funded have been held entirely by the Bank of England or by the national debt commissioners, the exchange of bills for stock has been effected by arrangement, but always under statutory authority. The first instance of funding was in 1709, when exchequer bills with the accrued interest thereon, together amounting to £1,775,000, were funded. Until 1797 there were only two further fundings, viz. £2,000,000 in 1717 and £986,800 in 1746. From 1797 to 1858, when the last "funding" of exchequer bills took place, no less a sum than £143,000,000 was cancelled by the creation of funded debt, of which about £105,000,000 was cancelled during the period of twenty-five years, from 1797 to 1821 inclusive. The largest amount of exchequer bills funded at one time was £27,262,000 in 1818-19. In 1861, under the provisions of Act 24 Vict. c. 5, exchequer bills ceased to be issued annually and to bear a daily rate of interest. The issue of exchequer bills at the present time is regulated by the Act 29 Vict. c. 25. They are of the nominal value of £100, £200, £500, or £1000, and are current for a period of five years, but they may be sent in for payment, after due notice, at the expiration of each twelve months from the date of the bills during their legal currency, and may be paid in for customs or inland revenue duties at any time in the last six months of each year of their currency. The rate of interest is fixed and advertised by the Treasury every half-year, and varies with the rate of interest prevailing in the money market at the time. The bills are prepared and issued by the Bank of England who receive an allowance for the management of the same. There has been no new issue of exchequer bills, beyond the periodical renewals, since 1861. They have been gradually superseded by EXCHEQUER BONDS AND TREASURY BILLS (*q.v.*), and there are none extant at the present time. G. H. H.

EXCHEQUER BOND. Unlike exchequer bills, these securities run for a specific period, say, two or three years from the date of issue. The bonds bear coupons, but may be registered or inscribed in the books of the Bank of England, in which case no coupons would be available, and the half-yearly interest would have to be applied for personally. A. E.

EXCHEQUER BOND, HISTORY OF.—These are securities on which money may be borrowed by the government under the authority of parliament. They are regulated by the Exchequer Bills and Bonds Act (29 Vict. c. 25), but they differ from exchequer bills by being issued for fixed periods, generally for one to three years, and bearing a fixed rate of interest. In the absence of any special provision in an act authorising money to be raised by this security, the principal of exchequer bonds is repayable by votes of parliament. Formerly, when bonds had matured, and it was found necessary to replace them by new bonds, special statutory authority had to be obtained in each case. It is usual now to take power in the act authorising the issue of bonds to replace them on maturity by new bonds or other securities. Exchequer bonds may, under treasury warrant, be delivered up to be registered or inscribed in the books of the Bank of England, and transferable certificates issued in lieu thereof. This class of security has generally been made use of for special services only.

Exchequer bonds were first introduced in 1853 by Mr. Gladstone, in connection with his scheme for redeeming or commuting certain three per cent stocks and South Seas annuities. Under 16 Vict. c. 23, holders of these stocks were offered, as one alternative, the option of taking exchequer bonds in exchange for their stock. The bonds were to be payable to bearer, so as to be readily transferable; to bear interest at $2\frac{3}{4}$ per cent per annum payable half-yearly until 1864, and thenceforward at $2\frac{1}{2}$ per cent per annum until 1894. They were to be offered for sale, the proceeds to be applied in paying off dissentient holders of stock, and they could be issued in exchange for and in cancellation of exchequer bills; only £418,300, however, were issued, of which £408,900 were in cancellation of exchequer bills. Subsequent acts made these bonds repayable out of moneys voted by parliament, and until such time interest would continue to be paid at $2\frac{1}{2}$ per cent. Power was also taken to replace them in 1894 by new bonds, to be issued for any term not exceeding six years. There was an issue in 1854-55 of £6,000,000, for periods not exceeding six years, to defray expenses connected with the Russo-Turkish and South African wars. Between 1874-75 and 1879-80 £7,750,000 was borrowed from the National Debt Commissioners on Exchequer bonds with three years' currency, for the purpose of granting loans to local authorities for public works. By 44 & 45 Vict. c. 55 they were converted into permanent funded debt. In 1876, under 39 Vict. c. 1, £4,000,000 was borrowed on exchequer bonds, also from the National Debt Commissioners, for the purchase of 176,602 shares in the Suez Canal Company (the value of these is now, 1913, over £39,000,000). An advance of £400,000 in 1885-86 to the government of the Cape of Good Hope for the construction of a railway was provided by the issue of exchequer bonds repayable by moneys voted by parliament. The colony repaid the advance in 1890, and the bonds were paid off as provided. The interest on the bonds was paid by the colony. Under the National Debt Redemption Act 1889 (52 Vict. c. 4) bonds to the amount of £18,100,000 were issued to pay off holders of three per cent stocks who had dissented from Mr. Goschen's conversion scheme of 1888. Of

this amount, bonds for £12,800,000, which were held by the national debt commissioners, were, by the National Debt (Conversion of Exchequer Bonds) Act 1892, converted into permanent funded debt. Since 1890 the principal issues have been £24,000,000 for the purposes of the war in South Africa; £6,000,000 for capital expenditure authorised by Naval and Military Works Acts; £2,600,000 under the Cunard Agreement (Money) Act 1904; £10,000,000 under the Finance Act 1905, to redeem Bonds issued for the South African War; and £21,000,000 under the War Loan (Redemption) Act 1910. In 1905 a new feature was introduced into this class of security. The Bonds issued under the Finance Act of that year were made redeemable in ten years from the date of issue by annual drawings of one-tenth part of the total issue in each year, and special provision was made for the annual redemptions by the appropriation of the requisite sum out of the new sinking fund of the previous financial year. The total amount of Exchequer Bonds now (1914) outstanding is £8,695,249. G. H. H.

EXCHEQUER, CLOSING OF THE (1672). The only part of the public debt which was incurred before the revolution of 1688 originated in the closing of the exchequer on 2nd January 1672-73. Maladministration of the finances, the sale of Dunkirk, and the disastrous close of the first Dutch war, undermined the credit of Charles II., which had been good for some years following the restoration. In 1666 the Commons proposed to appoint commissioners to examine the accounts of those through whose hands the money granted for the war had passed. The bill was delayed in the Lords till the prorogation. Commissioners were appointed two years later, and in consequence of their report the treasurer of the navy was expelled the House of Commons. It was therefore impossible to apply to the Commons for further supplies to execute the secret treaty with Louis XIV. which Charles signed at Dover in May 1670. In the emergency it was suggested that the sum of £1,328,526, the total amount borrowed from the bankers and others on the security of the supplies, should be appropriated with a view to overcoming the financial difficulties of entering on the Dutch war. In 1667 Charles had published a declaration to secure inviolably the course of payments at the exchequer, both with regard to principal and interest. But, on 2nd January 1672-73, he issued a proclamation to the effect that all payments upon assignations at the exchequer would be suspended for one year. The consternation in the city was great; the bankers were unable to meet their engagements, and many people were ruined. To quiet the public mind, the king promised to pay 6 per cent while the money was detained, and in 1676 letters patent were issued, charging the king's hereditary revenue with the interest, which amounted to rather more than £79,000 per annum. This engagement was regularly kept until the year before Charles's death, when payment was stopped. The creditors tried for twelve years, without success, to get legal redress, until, in 1697, judgment was given against the government. Somers, the chancellor, afterwards set aside this decision, notwithstanding the fact that ten out of the twelve judges were opposed to him. The chancellor's decree was afterwards reversed by the House of Lords, and in 1699 it was enacted that after 25th December 1701 the hereditary excise should be charged with the interest of the principal sum, at 3 per cent, redeemable on payment of £664,263, or half the principal. The principal was never repaid, and in 1716 it was incorporated with other public debts in the general fund which was then established. It may therefore still be regarded as part of the national debt.

[Grellier, *History of the National Debt*, p. 12 *seq.*—Hamilton, *Inquiry concerning . . . the National Debt*, p. 66; *State Trials*, xiv. pp. 1-114. —Hewins, "Origin and Growth of the National Debt," *Co-operative Annual for 1889*, p. 228, 229. —Thorold Rogers, *The first nine years of the Bank of England*, 8vo, 1887.—Defoe, *Compleat English Tradesman*, 3rd ed. i. 164, 188, 346, 347, ii. 94. There are several pamphlets dealing with the subject; amongst these may be mentioned, *The Joyful News of Opening the Exchequer to the Goldsmiths* (*in a letter by the Author of the Bankers' Case*, Thos. Twine), 1677.—*The Case of the Bankers and their Creditors, by a true Lover of his King*, 1674.—*Considerations on the Goldsmiths' Letters Patent*, 1678. "His Majesty's (Chas. II.) patent to the goldsmiths for payment and satisfaction of their debt," 1677 (patent granted to Sir Robert Vyner for £416,724, and to eleven other "persons hereafter named" for sums ranging from £295,994 down to £1784, the interest at 6 per cent to be paid by the quarter).] W. A. S. H.

EXCISE, THE, is the name given collectively to those duties which in the fiscal system of the United Kingdom are levied upon commodities produced within the kingdom itself, as distinguished from customs duties (see CUSTOMS) which are levied at the ports upon commodities imported from abroad. The word *excise* (Latin, *excido*) signifies etymologically *something cut off*; as an excise duty may in effect be considered something cut off or deducted, for the benefit of the state, from the price of the article as paid by the consumer. If there were no duty the consumer would pay a lower price for the article. The price, therefore, that he actually pays includes the duty; whence it follows that the duty itself is something deducted or subtracted from the actual price paid. The price in fact is divided into two parts, one part being

subtracted from the whole for the benefit of the state, and the remainder going to the vendor.

Duties of this character, whether levied on articles produced at home or imported from abroad, were at first equally known as excise duties, but in revenue parlance the word has long been restricted to duties on native commodities, those on foreign articles being known as the customs.

An excise duty properly so-called belongs to the category of indirect taxes, because though levied on the producer, its burden really falls on the consumer. It is, however, the practice to classify under the general head of excise the railway duty on passengers, a direct tax; of which the real as well as the apparent incidence generally falls on the railway companies; and a large group of *assessed taxes*, being license duties paid to the state in return for permission to practise or follow certain sports, trades, or occupations; *e.g.* the dog, game, and gun licenses and the licenses on brewers, auctioneers, and pawnbrokers. For a considerable period previous to their introduction into England excise duties formed part of the fiscal system of Holland. They were first imposed in this country in 1643 by the Long Parliament in order to raise funds for the war against King Charles the First. The principal articles first subjected to the duty were ale and beer, cider, perry, and strong waters, to which was soon afterwards added a long list of articles of food and clothing, *e.g.* flesh, victuals, and salt, alum, copperas, hats, saffron, starch, and all manner of silks and stuffs. The prime necessaries of life—flesh and salt—were subsequently struck out of the list, but, nevertheless, the general tendency from the Restoration (1660) to the administration of Sir Robert Walpole was rather to extend than to restrict the operation of these imports.

Walpole, to whom the material progress of England is so deeply indebted, applied himself from the first to fiscal reform. His biographer, Archdeacon Coxe, boasts of him that "he found our tariff the worst in the world and left it the best." By economical administration and the maintenance of a strictly pacific policy in foreign affairs, he enabled himself to help forward the growing prosperity of the country by a substantial alleviation of the burden of taxation. One of the main objects to which he set himself was to make the exportation of our manufactures, and the importation of the principal articles used in them, as free as possible. The reforms which with this view he carried out belong rather to the history of customs than of excise; but in the department of excise proper his beneficent activity made itself felt in the abolition of some duties, the reduction of others, and the simplification of many more. The most famous and the greatest of all his schemes, though it ended in failure, was the bill for warehousing wine and tobacco, generally known as the *Excise Scheme*, which occupies so important a place in our fiscal and parliamentary history that it deserves a separate notice (see EXCISE SCHEME).

The history of the excise since the administration of Walpole cannot here be written *in extenso*. It contains few features of salient interest, nor does it record any convulsion such as that which was excited by his unlucky Excise Scheme.

It will be observed on reference to the following list that the greater part of the excise revenue is derived from taxes on alcoholic drinks. This is no new fact; more than a hundred years ago Cowper drew attention to it in some indignant lines in "The Task."

> "*The Excise* is fattened by the rich result
> Of all this riot, and ten thousand casks
> For ever dribbling out their base contents
> Touched by the Midas finger of the State
> Bleed gold for ministers to sport away."

Such indignation is perhaps misplaced; as it is obvious that taxation should be imposed on luxuries rather than on necessaries; and whatever may be thought of the wisdom of consuming alcoholic drinks, they certainly cannot be classed among the necessaries of life. The tendency of modern legislation has been to throw the largest possible burden of excise taxation on alcoholic drinks, and to exempt, as far as possible, other articles.

Chief Heads of Excise Revenue, from the 4th Report relating to Customs and Excise, 1912-13 (net receipts)—

Beer Duty		£13,200,343
Spirit Duty		18,432,492
Railway Duty		283,929
Patent Medicine Labels		328,319
Playing Cards		32,033
Miscellaneous		205,346
License Duties—		
A. Liquor Licenses—		
(*a*) Manufacturers	£427 054	
(*b*) Dealers	126,714	
(*c*) Retailers	3,949,829	
(*d*) Occasional licenses, etc.	16,737	
Total Liquor Licenses		4,520,334
B. Auctioneers, etc.	87,332	
Hawkers	25,336	
Pawnbrokers	40,328	
Plate Dealers	65,920	
Patent Medicines (Makers and Dealers)	10,780	
Methylated and Motor Spirit (Makers and Dealers)	14,693	
Tobacco (Growers and Manufacturers)	4,736	
Tobacco (Dealers)	102,408	
Refreshment Houses	9,486	
Miscellaneous	694	
Total		361,713
C. Male Servants	16,381	
Carriages	35,956	
Motor Cars	535,146	
Armorial Bearings	5,096	
Total		592,579
D. Gun	20,776	
Game	34,562	
Total		55,338
E. Dog		48,775
Fines and Penalties		2,487
Total		£38,063,688

The Finance Act of 1907 directed that the duties on Beer and Spirits and the Excise Licenses should be paid into the Exchequer, an equivalent amount being issued to the Local Taxation Accounts out of the Consolidated Fund. The power to levy the duties on licenses for game, dogs, guns, carriages, armorial bearings, and male servants was, from 1909, transferred in England and Wales to County and Borough Councils. The Finance Act of 1910 increased the Liquor and Motor Car Licenses, but provided that the payments to the Local Taxation Accounts arising from these, and also from the Beer and Spirit duties, should continue on the scale of the receipts from these duties in 1908-9, the surplus being retained for the Imperial Revenue. This applies to carriage licenses in Scotland and the whole of the motor car licenses in Ireland. The following are some of the duties that have been repealed: Cider, 1830; Glass, 1845; Bricks, 1850; Soap, 1852-53; Paper, 1861; Hops, 1862.

[Dowell, *Hist. of Taxation and Taxes in England* (ed. 1888); Highmore, *Excise Laws*; Ann. Rep. of Commissioners of Inland Revenue, esp. 1870, 1885, and of Commiss. of Customs and Excise.]

EXCISE SCHEME, The, was the proposal introduced into parliament by Sir Robert Walpole in 1733 for applying what is now known as the bonded or warehousing system to tobacco, and afterwards to wine. Instead of paying duty, or giving bonds, the merchant, on landing tobacco from Maryland or Virginia in London or Bristol, was to lodge it in warehouses under the control of excise officers, to pay duty only as he took it out for home consumption, and if taken out for re-exportation abroad no duty was to be paid. The same system was to be extended to wine. Various advantages were claimed for the change. First, it would put an end to sundry frauds on the revenue, from smuggling on an immense scale down to abuses which dishonest merchants, practising on discounts, allowances, and drawbacks, and rapacious lightermen and watermen, carried out at every port in the island. Second, the prevention of these frauds and the decrease of smuggling would be a great gain to the honest trader. Third, accompanied as it was by a simplification of rates, this cheaper and easier collection would be a great advantage to the revenue. Fourth, and much the most important of all, it would tend to make London a free port, and by consequence the market of the world. Such were the advantages claimed for the change at the time. But another, and not the least important, may be added, viz. that it anticipated and fulfilled the principle of Adam Smith's fourth canon of taxation, by taking as little as possible out of the pockets of the people beyond what it yielded to the revenue. The merchant, relieved of the necessity of paying the duty on the importation of the article, would have the use of his capital for a longer time, and would therefore be able to sell at a lower rate to the consumer. In fact the merchant would gain, and the state lose, the interest on the amount of the duty for the period between the importation and the sale of the article. The merchant's, and, through him, the consumer's gain would in practice be greater than the state's loss, as the rate of interest which he would require on his capital, in order to make his business remunerative, would greatly exceed the rate at which the state could borrow; and moreover the loss of the state was more than counterbalanced by the economy of the cost of collection, and the prevention of fraud, which the scheme involved.

Such was the famous excise scheme, which alone would suffice to establish Walpole's reputation as a finance minister far in advance of his age. But the public mind of the time was not sufficiently instructed to receive it; and the design had no sooner been bruited abroad than a popular outcry arose, one of the loudest and fiercest of which history makes mention, which shook his power to its foundations, and at no long distance of time compelled him to abandon the scheme. The parliamentary Opposition, whose motives need no explanation, used all their powers of misrepresentation against Walpole's plan, the object of which was to turn the customs duty on the importation of tobacco into an excise duty on its consumption, as a scheme for levying a general excise over the whole range of commodities. Food, clothing, and the other necessaries of life were, they declared, to be loaded with a crushing tax. Every man's house might be invaded at any hour by the excise officer. Every man's goods and all his dealings would be exposed to minute and ceaseless inquisition. A great standing army of revenue officers would be created, which would overturn Magna Charta, — even undermine parliament. Such were the misrepresentations to which the credulity and factious spirit of the people, and the general unpopularity of the excise as a whole, made them an easy prey. The whole country resounded with shouts of "no slavery, no excise, no wooden shoes." The majority in the House of Commons in favour of the measure went down from sixty-one on the first resolution to seventeen on a subsequent issue; and this dwindling of his supporters, combined with the growing frenzy out of doors, determined Walpole to abandon a measure which in the inflamed temper of the nation could hardly be put into execution without an armed force. "I will not," he said, in announcing his resolution to his friends, "be a minister to enforce taxes at the expense of blood."

The abandonment of the scheme was celebrated throughout the country with rejoicings as for a national victory; the crisis was long remembered; and it is noteworthy that the

popular feeling, many years after the occasion had passed away, found an exponent in the tory prejudices of Dr. Johnson, who in his dictionary defined "excise" as a "hateful tax levied upon commodities, and adjudged not by common judges of property, but by wretches hired by those to whom excise is paid."

For a compact and trustworthy account of Walpole's excise scheme the reader is referred to Lord Morley's *Walpole* (series of English Statesmen, Macmillan and Co.), from which the foregoing description is mainly taken.

Writing more than forty years after Walpole's failure, Adam Smith had still to lament that so excellent a scheme had not been resumed by subsequent ministers (*The Wealth of Nations*, bk. v. ch. ii.). The credit of resuming it was reserved for William Pitt, who notwithstanding the inevitable parliamentary opposition, carried it into law in 1789 (29 Geo. III. c. 68). [See E. Leser, *Ein Accise-Streit* (Walpole's Scheme), 1879.]

The amounts raised by means of the excise have varied much since the first imposition of the tax levied under this name. As the articles subjected to it have differed very greatly, an exact comparison is scarcely possible. In the earlier periods the excise was farmed out, and "in 1657 an offer was made to give, for the farm of the excise and the port duties, no less than £1,100,000 per annum" (Dowell, 2nd ed. vol. ii. p. 13). Up to the end of the 17th century, the yield scarcely altered. Dowell writes (p. 62), "the revenue from inland duties had varied considerably in different years. In 1700 over a million, it was in 1702 nearly £1,400,000." During the later half of the 18th century great additions were made to the tax, though Walpole's proposals were not accepted (see Excise).

The gross produce of the tax has been in round figures at the following dates:

1835 . . .	£15,200,000
1855 . . .	£15,300,000
1875 . . .	£28,400,000
1895 . . .	£30,500,000
1905 . . .	£35,600,000
1913 . . .	£38,000,000

EX. DIVIDEND. A stock exchange phrase, shortened, as usual, to signify that the price at which a given security can be bought or sold is exclusive of dividend, which has been, or is about to be deducted. Unless so specified, the security in question is *cum dividend*, meaning that the dividend or interest accrued since the previous distribution is covered by the purchase money. Certain securities, including corporation bonds, exchequer bills, Indian deferred paper, English mortgage bonds, never carry interest in the prices, which are quoted net, the buyer being charged interest up to the date of the completion of purchase (see Ex. All; Ex. New). A. E.

EX. DRAWING. This phrase simply means that in case of the Drawing (*q.v.*) of bonds at par, the bargain is not to be affected by the price obtained by the hazard of drawing, and the buyer gets no benefit. Thus, a specific government bond might have been bought at 90 a week or two before the periodical drawing of such bonds, and the buyer would get £100 if his bond happens to be among the lucky numbers, unless the words "ex. drawing" formed part of the contract. A. E.

EXECUTION is the name of the procedure by which the judgment or order of a court of law is enforced. This is generally done by "writs of execution," which, in the case of judgments of the high court, are issued in the central office or a district registry, and directed to the sheriff of the county in which they are to operate. The usual writs issued in the case of money claims are writs of *fieri facias* (cp. Fieri Facias, Writ of), commonly called fi. fa. and writs of elegit (Elegit, Writs of, *q.v.*); claims are also enforced by "garnishee orders," viz. orders by virtue of which the judgment creditor obtains a charge on debts owing to the debtor, or "charging orders" which affect stocks or shares standing in the debtor's name, or, if the debtor has an equitable interest in the property out of which the judgment creditor seeks to obtain payment of his debt, by the appointment of a Receiver (*q.v.*) Judgments for the recovery of land are enforced by "writ of possession," and judgments for the recovery of any property other than land by "writ of delivery" or "writ of attachment"; in the case of judgments directing a person to do any act, other than the payment of money, the disobedient party is subject to imprisonment through the instrumentality of a "writ of attachment" or through "committal," which two means of execution differ in form only. Imprisonment on account of the non-payment of money has been nearly abolished, and where it occurs it is punitive in its nature, and not merely a means of enforcing payment (see Debt, Imprisonment for). E. S.

EXECUTOR; the legal administrator of the personal estate of a deceased person. In Scotland if appointed by written nomination of the deceased he is called executor nominate, if by decree of the commissary court executor dative, the former answering to the English executor the latter to the English administrator. His title in either case is completed by *confirmation* (see Confirmation of Executor) which answers to the English taking out probate or letters of administration. A husband has in Scotland no absolute right to administer to his wife's movable or personal estate. In default of an executor nominate, a residuary legatee is preferred, then the next of kin, those in the same degree being entitled to be joined if they please, then the husband or wife of the deceased, then the creditors, and lastly a special legatee. An executor differs from a trustee in that an executor's duty is to distribute the fund, a trustee's to hold it.

[Currie on *Confirmation of Executors.*—M'Laren *on Wills*, ii. § 1657.—Dove Wilson, *Sheriff Court Practice*, 4th ed., 546.] J. W. B. I.

EXECUTRY (Scottish); the subject of an executor's administration; the whole of the personal estate of a deceased person, equivalent both to legal and equitable *assets* in England. J. W. B. I.

EXERCITOR (Scottish); a term derived from Roman law and implying one who employs a ship for his own profit in trade, and to whom the profits belong. It matters not whether he is the actual owner or only the freighter. He is liable for necessaries ordered by the master. His obligations properly fall in the first instance under the jurisdiction of the admiralty court.

[Bell's Pr., § 450.] J. W. B. I.

EXHEREDITATIO signifies, in Roman law, a testator's declaration in his will that he excludes from being his *heres* a member of his family belonging to the class of relations who cannot be passed over in the will in silence, but must either be appointed *heredes* or thus declared to be disinherited. E. A. W.

EX. NEW. This refers to the quotation of prices on the stock exchange for shares or other security, the holders of which are about to receive an allotment of new stock at what may be considered an advantageous price of issue. When these words form part of the contract, the seller retains the advantage, if any, and the buyer's right to the security is exclusive of any right to subscribe to the new issue (see Ex. All; Ex. Div.). A. E.

EXPECTATION OF LIFE, a term introduced by De Moivre, denotes the number of years which persons of a certain class, *e.g.* English males, live on an average after a certain age, *e.g.* 20; the average being obtained as follows. The number of years which each of a great many, say *n*, specimens of the class under observation, lives after the assigned age having been observed, the sum of these numbers is divided by *n*. The Expectation is thus the arithmetic mean of the *n* observed numbers (see Average). It is contrasted with another average of the same numbers, viz. the *Median* (see Average), technically termed the "equation of life." The term "expectation" is objected to by Dr. Farr as suggesting the latter rather than the former sort of average. He prefers to say *mean after-lifetime*. Comparing the two kinds of average, Neison seems to think that the expectation of life is not so well suited "for medical and other purposes in which it is required to determine the relative value of an improvement or other change which may have taken place within a given period of life."

(See Death-rate; De Moivre; Insurance; Mean Afterlifetime; Statistics.)

[Walford's *Insurance Cyclopædia*, article "Expectation."—Farr, *Vital Statistics*, pp. 279, 309.—Neison, *Contributions to Vital Statistics*, p. 100.—Report of the Registrar-General for 1885, Supplement.—Humphreys, *Journal of the Statistical Society*, 1883.] F. Y. E.

EXPEDITATION. By the Forest Laws (*q.v.*) all mastiffs or other large dogs kept within a forest had to be expeditated, *i.e.* maimed sufficiently to prevent them chasing the deer. According to the laws of Canute the dog was to be hamstrung, but by a charter of Henry II. a somewhat milder operation was allowed, three toes of one forefoot being cut off with a chisel, leaving the ball of the foot intact. For keeping an unexpeditated dog within a forest a fine of 3s., called "footgeld," was imposed, but before the end of the 15th century in many of the English forests this fine had become a customary payment, sometimes called "hound-silver," collected triennially, which formed no small item in the revenues of the forest owner.

[See Ducange, *Glossarium mediæ et infimæ Latinitatis*, Editio nova a L. Favre, Paris, 1884.—Manwood, *Forest Laws*, London, 1615.—Cowell's *Interpreter of Words and Phrases*, London, 1701.—Forest Accounts, some of which are quoted by Manwood.] A. H.

EXPENDITURE or SPENDING has two distinct meanings which are often confused.

1. Expenditure may mean simply the payment out of money, that is, the exchange of money for other goods. In this sense it does not imply any consumption of wealth on the part of any one, and it cannot be opposed to "saving." A man who saves £100 a year ordinarily expends or spends those £100, *i.e.* exchanges them for other goods, just as much as if he did not save anything. The things on which he expends them will be different, but the expenditure, unless of course the money is hoarded, will be the same.

2. Expenditure may mean payment of money for personal consumption on the part of an individual, and consumption, pure and simple, on the part of the community. In this sense it is rightly opposed to "saving." The £100 a year saved by an individual is not in this sense of the word expended or spent either by himself or any one else. It is simply the value in money of a part of the community's income, which, instead of being consumed, has been added to the capital of the country (see Saving, Productive and Unproductive). E. C.

EXPENSES OF PRODUCTION (see Production).

EXPERIENCE. Upon the value of experience in the study of political economy the most contradictory opinions have found adherents.

Some economists have expressed themselves as though political economy were a science similar in type to astronomy—as though all economic truths could be derived by strict deduction from one or two first principles,

such as "All men desire wealth," or "All men are averse to labour." Other economists have denounced general reasoning, and have laid exclusive stress on the accumulation of facts. They would apparently reduce political economy to the task of observing and recording particulars without any admixture of inference. These opposite opinions have rarely been held in their most extreme forms. But by stating them as forcibly as possible we may be assisted to detect the fallacies which they involve.

It will appear upon examination that neither of these principles can be carried out in its integrity. The attempt to carry out either would result in intellectual paralysis.

There has never yet existed an economist so rigorously deductive in his method as not to draw to some extent upon experience of economic phenomena. Many economists have indeed drawn upon a field of experience too restricted to justify dogmatic conclusions. Many economists have been too much influenced by the economic experience of their own time, or of their own country. Even this narrow experience they may not have studied exhaustively. They may have picked up their knowledge of it insensibly, here and there, bit by bit It is thus that the man of business, as contrasted with the student, acquires his knowledge of economic phenomena. Ricardo, the greatest of those economists who are alleged to have been rigorously deductive in method, may be said to have acquired most of his knowledge in this way. Such knowledge, being very partial, may sometimes prove misleading. But even such knowledge has great influence upon the development of theory. Ricardo's economic theories would certainly have been different had he lived in another age than the nineteenth century, or in another country than England.

An economist strictly deductive in method could never get beyond his first premisses. The contrary seems possible because the economist who apparently deduces everything from first principles in reality weaves into his argument statements of fact and wide generalisations which have become so familiar that he and his readers forget how they were first acquired.

Nor has there ever yet existed an economist who merely observed and recorded. Those economists who aimed at this ideal have nevertheless written history. The writing of history involves processes of selection, comparison, and inference, in which the historian's mind is active. No two persons perform these processes in quite the same way, and it is extremely easy to make mistakes in performing them. It is not merely that historians often infuse their work with their own political or religious sentiments, with the prejudices of their own age or their own class. It is rather that the historian cannot construct a narrative out of facts without interpreting those facts. But he cannot interpret the facts without using his mind, without adding to, or rather, without transforming, those facts.

The object of all science, including political economy, is not merely to amass facts but also to explain them. Facts are explained in so far as they are successfully brought under general laws. The general laws are always at first hypotheses, or in the vulgar tongue, guesses—guesses at truth. Hypotheses are suggested by facts, and facts are interpreted by hypotheses. He who forms a hypothesis with hardly any knowledge of the facts is pretty sure to throw away his trouble. He who clings to a hypothesis once formed, neglecting or rejecting new facts, does worse, for he is trying to confirm himself in error. But to refrain from forming hypotheses is impossible to a reasoning creature, and, if it were possible, would be suicidal. The value of experience is not absolute but varies directly as the power of the mind which has the experience. One glance at the field of battle will suggest a decisive movement to the great general. The vicissitudes of a short and obscure life will give the great poet a key to human nature in its infinite variety. The scientific genius, although less brilliant, is not essentially different from theirs.

Whether in physical or in political science the master mind is that to which facts suggest their own explanation. F. C. M.

[Cairnes, *Character and Logical Method of Political Economy.*—Bagehot, *Economic Studies.*]

EXPERIMENTAL METHODS IN ECONOMICS. Experiment in the scientific sense has been well described as "putting in action causes and agents over which we have control, and purposely varying their combinations and noticing what effects take place" (Herschel, *Study of Natural Philosophy*, p. 76). In sciences such as physics and chemistry, in which the phenomena are amenable to arrangement, it is by far the most potent instrument of discovery. Where, however, there is not the same facility for easy manipulation, the inquirer is compelled to fall back on the less effective method of simple observation. Instead of creating instances for himself, he has to find them in nature, or wait till they are presented spontaneously to his view.

Economics, in common with the other social sciences, clearly belongs to the latter class. The phenomena of wealth are closely inter-connected, and are besides affected by the other forms of social activity. Hardly any economic event can be said to be the result of a single cause, it is rather the product of several contributory causes. Nor are the total effects of any one agency easily separable; they are combined with those of others in a whole which cannot be analysed. In technical language "plurality of causes" and "intermixture of effects," the

two great hindrances to the use of experiment (Mill, *Logic*, bk. iii. ch. x.), are generally present in economic facts. To secure the requisite isolation of any phenomenon selected for study is rarely possible. The most rigorous form of inquiry, known as the "method of difference," the essence of which "is the comparison of two instances, which resemble one another in all material respects, except that in one a certain cause is present, while in the other it is absent" (Keynes, *Scope*, p. 170), is plainly excluded, since we cannot introduce a single cause that will have only a measurable effect, nor can we be sure that the surrounding conditions remain unaltered. The "method of agreement" in which the instances compared resemble each other in only one particular is not merely inferior as an experimental resource, but is inapplicable to social phenomena. Two countries or periods that had one common feature would have more than one. In two classes of cases, however, experiment may be sometimes used, viz. (1) in reference to the premises or *data* of economic science, thus the "law of diminishing returns" admits of experimental proof; (2) More important than the preceding exception, which is rather apparent than real, are those cases in which, by deductive reasoning, it can be shown that the action of an economic force is limited, and then its working within those limits can be experimentally ascertained.

These exceptions notwithstanding, it may be said that scientific experiments (*experimenta lucifera*) are a very slight resource in economics.

The case is somewhat different with regard to practical questions. Legislative measures and individual actions are, if so intended, so many experiments on the social system. Thus if several countries, widely differing in other respects, have established a system of peasant proprietary with good results, while several other countries, also widely differing *inter se*, are without that system and show inferiority, we may argue that peasant proprietary is experimentally justified. The same reasoning would be applicable to commercial policy, and has actually been used in reference to the case of Victoria and New South Wales, but illogically, as a number of cases are required to exclude other influences.

Again, by applying special legislation, *e.g.* a particular kind of land tenure, to one part of a country, we can ascribe to its influence the special effects noticed in that district. Practical experiments (*experimenta fructifera*) may also be employed by means of (1) permissive legislation, or (2) temporary legislation.

Private persons also carry out practical economic experiments, as in the cases of profit-sharing (Leclaire), and the recent eight hours day experiment at Sunderland (*Economic Journal*, ii. pp. 755, 756). A large accumulation of instances may even give a very near approach to rigorous scientific proof.

A vaguer use of the term "experimental method" is common in continental and especially in French writers. J. B. Say, for example, declares that the true method of political economy is *La méthode expérimentale qui consiste essentiellement à n'admettre comme vrais que les faits dont l'observation et expérience ont démontré la réalité* (*Traité, Discours prélre*, p. x. 5th ed. 1826). Here "experiment" is used as synonymous with "experience"; it therefore includes observation and experiment in the strict sense.

[J. N. Keynes, *Scope and Method of Political Economy*, pp. 169-178.—J. S. Mill, *Logic*, bk. iii. chs. viii., x.; bk. vi. ch. ix.—G. C. Lewis, *Methods of Observation and Reasoning in Politics*, ch. vi. —Jevons, *Methods of Social Reform*, pp. 253 *seq.* —Léon Donnat, *La Politique Experimentale*, 2nd ed. Paris, 1891]. C. F. B.

EXPERT. An expert may be defined as a person possessing special knowledge of any science or art. Art is here taken in its most comprehensive signification, to include the useful as well as the fine arts, cooking or carpentry as well as music or painting. The opinion of an expert on matters connected with his own subject is more likely to be correct than the opinion of a man to whom that subject is almost or altogether unknown. But the degree in which an expert's opinion outweighs the opinion of the ordinary man will vary according to the nature of the subject.

For, first, the subject may be one with which the ordinary man has no acquaintance, or it may be one with which he is acquainted, although not so fully as the expert. Thus every man in his senses knows to some extent what food is wholesome, although he may not know so much on this point as a qualified doctor. Every man who can write has some power of comparing hands, although not so much power as belongs to an expert in handwriting. But only an expert in navigation can determine the exact position of a ship out of sight of land. Only an expert in astronomy can determine the probable distance of a fixed star from our planet. In such matters the judgment of the ordinary man is absolutely worthless.

Secondly, the subject may be so complex that no expert has more than a very imperfect knowledge of it. Political and economic science are characterised by this complexity. Upon political or economic questions the opinion of a man who knows much is far more valuable than the opinion of a man who knows little or nothing; but even the opinion of the man who knows much affords a very imperfect security. Such complex questions often present different aspects to different classes of experts. Let us suppose that an opinion is required on the expediency of a law to regulate the hours of labour. At least five different classes of experts

are more or less entitled to be heard:—(*a*) The economist who has read and reflected upon the theory of economic phenomena; (*b*) the political philosopher who has read and reflected upon the theory of the state and of legislation; (*c*) the statesman who is familiar with the practice of government, and can judge what kind of laws it is usually expedient to make and possible to enforce; (*d*) the employer who has had the opportunity and the will if not the wisdom to discover how production can be carried on to the greatest profit; (*e*) the workman who has had the opportunity and the will, if not the wisdom, to discover what are the best conditions of life which he can obtain for himself; all these men can bring to the determination of the problem a knowledge which other men do not possess, and are entitled in a greater or less degree to speak with the authority of experts. One person might, of course, combine more than one of these characters, and might, therefore, claim a higher degree of authority.

Thirdly, the subjects of knowledge differ in the degree in which they excite passions such as prevent the expert from employing his intellectual superiority to its fullest advantage. On any subject, indeed, were it astronomy or textual criticism, the judgment of an expert may be disabled by vanity or love of contention. But on those subjects which immediately touch the interests of mankind, notably theological, political, and economical subjects, the judgment of the expert is more likely to be disturbed by his passions. These passions are at least as ungovernable in ignorant men. But wherever they prevail they lessen the interval between the ignorant man and the expert. For the finer the intellectual instrument the more it is disturbed by acute emotion. F. C. M.

EXPERTISE (French) is the legal process by which judges, when called on to decide special or technical cases, may appoint, on their own authority, or on the demand of one or both of the litigants, persons possessing the necessary knowledge or experience, called experts, to examine, and report on, the points at issue. The conditions under which those operations are conducted are laid down in Arts. 303-323 of the Code of Civil Procedure. One of the most frequent applications of the law is in the settlement of disputes between foreign importers and the French customs authorities relative to the class, quality, origin, or value of merchandise subject to duty. The first supplementary convention to the Anglo-French treaty of commerce of 1860 conferred on British importers in France the right to demand an *expertise*. When the Customs propose to exercise the right of preemption, the importer and the customs each nominates one of the experts. In case of disagreement the two experts choose an umpire, and if they cannot agree on the choice, the umpire is appointed by the president of the nearest tribunal of commerce. Objections were frequently made that the persons named as experts did not possess the necessary qualifications, and on the renewal of the treaty of commerce, in 1873, a protocol was signed, stipulating that they should be chosen from a list of merchants or manufacturers drawn up by the chambers of commerce in each locality having a customs bureau. A British chamber of commerce had just been founded in Paris, and that body submitted to the Paris chamber (French) the names of the principal British merchants in Paris, for them to be comprised in the list of experts; but the French chamber of commerce refused to nominate them on the ground of their foreign nationality, although British traders had previously been accepted as experts. The British chamber appealed to the Foreign Office, and on the intervention of the British ambassador the French minister of foreign affairs considered the claim a just one, and some of the names proposed were added to the list of experts in Paris. Those names were, however, subsequently removed from the list on the expiration of the treaty of commerce in 1881, and British importers who now have disputes with the French customs can only be represented in an *expertise* by a French merchant or manufacturer, who is naturally disposed to impede rather than to facilitate foreign competition in his own trade. There is no appeal from the decision of the experts in commercial affairs, when they agree, but civil *expertises* are still governed by Art. 323 of the Code of Civil Procedure, under which judges are not bound to adopt the opinion of experts if they are not convinced by it. T. L.

[*Lois du 27 Juillet 1822 et du 7 Mai 1881; arrêts de la Cour de Cassation, 30 Avril 1838, et 30 Janvier 1839.*]

EXPLOIT. The French verb *exploiter* primarily means simply to use in such a way as to make a profit out of. It is applied to such actions as working a mine or a railway, cultivating a farm, or publishing a newspaper. There are some things which it is admittedly improper to use in such a way as to make a profit out of them; it is disgraceful, for instance, to *exploiter* any one's credulity, ignorance, or good nature. Hence the word comes to have sometimes a bad sense. The socialists who teach that the capitalist obtains an illegitimate gain by employing men for wages have applied the term to his action in this bad sense. To *exploiter* men or labourers thus means to use them in such a way as to make a profit out of them, it being at the same time implied by the use of the word that this, though not perhaps disgraceful to an individual who does it under present circumstances, is fundamentally improper, and would not be allowed in an improved state of society.

It is almost exclusively in this bad sense that

the word "exploit" has been introduced into English. E. C.

EXPORTS AND IMPORTS, see IMPORTS AND EXPORTS.

EXPORTS, DUTIES ON. Duties on exports have been generally condemned by modern economists, but they survive in many of the British possessions as well as in some foreign countries. The history of these duties in Great Britain is merged in that of the customs revenue. The original customs duties were, in fact, duties on exportation. They appear to have been levied by prerogative of the crown from early times, but the first statute which imposed them was one of 3 Edward I.

Two somewhat diverse theories have been suggested as explanatory of the origin of these duties in England. One, which we find first indicated by Sir W. Petty, is adopted by Mr. Dowell (*History of Taxation*). It holds that the sovereign power simply levied a toll on all merchandise, whether inward or outward, as a reward for its protection of the merchant. The duties "were in the nature of a premium paid to the king for insurance." The analogy of the customs duties levied at Athens and at Rome (*portoria*) may be held to favour this view. The other theory is on the whole the more probable, and is that adopted by Mr. Hubert Hall (*History of the Customs*); the king's chief concern was to see that he got as much revenue as he could. He was from ancient times entitled to a purveyance or prise on certain classes of commodities—"if then these were conveyed beyond the kingdom the crown would suffer a possible loss to its state or dignity." When it was found that the wools and hides on which the king was entitled to the internal toll or prise were being exported and escaping taxation, he at once put on a countervailing export duty in order to secure his revenue (see PRISAGE).

It seems probable that these duties were adjusted at the discretion of the crown according to its necessities, and Mr. Hall thinks that immediately before the statute 3 Edw. I. "it is probable that the commuted prise on staple exports, such as wool, hides, and minerals, was taken at an average rate of half a mark per sack of wool or an equivalent bulk of woolfells, a mark per last of hides, and an *ad valorem* duty of 3d. on every librate or twenty solidi of lead or tin."

The Act of 3 Edw. I. (1275), which is the first instance of levying taxation by act of parliament, placed the export duty at

½ mark per sack (26 stone) of wool.
,, ,, per 300 woolfells.
1 ,, per last of leather.

These are the *custuma antiqua sive magna*, and the chief contributor to the revenue was the wool. Some thirty years after the passing of this act the produce was as follows:

Wool at 6s. 8d. . .	£1501	0	9½
Woolfells at 6s. 8d. .	57	15	1
Leather at 13s. 4d. .	0	8	7½
Total of the great customs	£1559	4	5¾

In February 1303 an agreement was made with the alien merchants, whereby they undertook, in consideration of the king's protection, to pay 50 per cent beyond the ancient customs on wool and leather, and certain fresh rates on other commodities whether exported or imported. Rates were specified for wax, cloth, and wine, and all other articles were to be charged 3d. in the pound of 20 shillings. These were the *custuma nova sive parva*.

The next development of the exports (as part of the customs) duties was by the statute of 49 Edw. III., which levied the due of tunnage and poundage, afterwards known technically as a subsidy. The poundage was a duty of 6d. on the pound-weight of all articles exported and imported.

With variations in the rate these two forms of export, and import, duty were continued on the same basis down to the Restoration in 1660. They were granted by the Commons for periods of years as a rule; sometimes for the life of the reigning sovereign. After Agincourt in 1415, such a life grant was made to Henry V., and the duties had gone up considerably, as follows:—

	From denizens.			From strangers.		
On wool per sack	£2	3	4	£3	0	0
On woolfells	2	3	4	3	0	0
On leather per last	2	3	4	5	6	8

and in the following reign the rate for wools, etc., was raised to £5 for strangers, and that for leather to £5 for natives. The subsidy of poundage had already been raised to 1s. on the pound-weight, and there was a special duty of double that amount on tin exported by strangers. In 1421 the yield of all the customs was £40,687, of which the great custom on wools, export duty, produced £26,036; in 1431 the total was £34,851, of which the greater proportion was derived from export duties. But the revenue appears to have been a falling one; the customs regulations were anything but complete, as is shown by the act of 27 Hen. VIII. c. 14, to regulate the exportation of leather from other ports besides Southampton and London; and there were constant interferences with the export trade by way of partial or complete prohibition, as late as Mary's reign. In 1570 the value of woollen goods and cloth exported from England amounted to £26,665, and from this was obtained £2388 : 10 : 11, viz. customs £1523, and subsidy £865 : 10 : 11; gradually the revenue from imports was becoming the more considerable.

The Long Parliament, after declaring in 1640 that "no subsidy, custom, etc., may be imposed upon any merchandise exported or imported without common consent in parliament," proceeded to levy heavy duties on the old lines. The year 1660 marks the beginning of a transition stage. In the Book of Rates for this year, 212 articles were subject to export duty "rated for duty outwards." The duties granted to Charles II. were levied with some modifications in the ninth and tenth years of William III. as the "new subsidy" and continued by 9 & 10 Anne, c. vi. (1710) by the act "for reviving, continuing, and apportioning certain duties upon several commodities to be exported and certain duties on coal, etc., etc." But in 1721 the export duties on corn, woollen fabrics, linen manufactures, and other staples were repealed; the mercantile theory with its mania for exportation had found these duties obstructive. Nevertheless in Saxby's manual of the Customs (dated 1757) some twenty-five pages are occupied with the enumeration of the goods rated for duty outwards, and the directions for paying the proper duties, and in Pitt's consolidating Customs Act of 1787 there are fifty articles subjected to export duty, many of them being of foreign origin. These duties were increased during the great war, and at the beginning of the century, under the act of 1809 (49 Geo. III. c. 98) Sched. A "Outwards," which rated for permanent duty, and in a parallel column for temporary or war duty:—

(*a*) Foreign commodities to the number of sixty-three at varying, chiefly specific, duties.

(*b*) British goods, of which coals, skins, and other articles were subject to specific duty; all other goods, wares, etc., to an *ad valorem* duty—excepting cotton, linen, sugar, woollen goods, and certain special exemptions with reference to the port of destination.

By an act of 1810 linen goods were subjected to an *ad valorem* duty of 15 per cent on export. But with the close of the war and the progress of the new economy the backward policy was reversed. In 1815 the export duties produced £365,598, and in 1826, £102,255. Under Mr. Huskisson, in 1826, the schedule of articles left subject to export duty was as follows:—

Coals, per chald. 1s. 6d. to 30s. 3d. according to destination, etc.
Culm, per ton, 1s. to 10s., according to destination, etc.
Skins, per 100, 1s.
Wool, per lb., 1d.
Woollen manufacture, per lb., 1d.
Home produce with certain definite exemptions, *ad valorem*, 10s. per £100, *i.e.* ½%,

and with Peel's reformed tariff of 1842 these disappeared altogether. In 1901 an export duty of 1s. a ton on coal was levied, producing about £2,000,000 per ann. This was removed in 1906.

One of the few accidental gains to be placed to the credit of the old mercantile theory was that it tended to discourage duties on exportation. Sir W. Petty (1679) shews a consciousness that such duties required careful watching. Sir John Sinclair (1790), who had imbibed the doctrines of Adam Smith, is the first writer apparently who distinctly expresses a doubt as to the propriety of their imposition. Formerly, he writes, almost every commodity sent out of the kingdom was subject to such a duty; it was supposed that the duty came out of the pockets of foreigners, but "such ideas are now exploded." He referred to the principal export duties at that time, under Pitt's recent act, as being those on coals and lead, with certain duties on raw produce intended to give our manufacturers "an advantage over rivals." McCulloch (*Taxation and the Funding System*) has a full discussion of the economic propriety of export duties, and suggests the grounds on which they have generally been condemned. His statement of the arguments for and against the retention of such a duty on coals, published just at the time when that duty was finally removed, is of special interest; it embodies the argument in which economists have for the most part summed up the whole discussion on these duties, viz. that they should not be levied except in the case of a country which has a monopoly of supply of the commodity taxed, or such an advantage in its production as to approximate to a monopoly.

Turning to the British possessions it is natural to find that in those which were acquired during the 17th century, when export duties were an unchallenged feature in the fiscal system of this country, the export duty is, so to speak, bred in the grain; in the colonies established towards the close of the 18th century such a duty practically had no place.

The notorious 4½ per cent *ad valorem* duty which created such squabbles between the crown and the West Indian islands was the progenitor of colonial revenues. At the time of the Restoration, when all the revenues of the crown were being revised, plantation enterprise was at the height of its activity, and it occurred to the crown advisers that the new dominions beyond the seas ought to contribute their share. Thus the origin of colonial customs was precisely the same as that of the English customs. The patent of 1663, constituting the office of commissioners of customs, empowered them to levy and collect a duty of 4½ per cent *ad valorem* on all dead produce exported from Barbados and certain other sugar colonies, and from the plantations in America. In respect of the latter no such duty was ever actually levied. In the West Indies it was the cause of much grumbling; already, in 1689, it was urged that "moreover this four and a half is collected in such manner that in the judgment of all that have

tryed it, the attendance and slavery is a greater burthen than the duty" (*Groans of the Planters*); it was found to be "the same thing in effect as a tax on lands." It was the subject of a great action in 1763 in a case arising on the island of Grenada, Campbell *v.* Hall, where payment of the duty was refused on the ground that the island was ceded by France on the condition that the privileges of the former *régime* should be secured to the inhabitants. This led to the exception of "the Ceded Islands," and Jamaica, from the operation of the duty. It was for many years paid in kind, and in 1778 the right so to pay it was successfully contested (Macpherson's *Annals*, iii. 625). This is not remarkable in an age when sugar was the current money of account. For the better collection of this and other duties the customs department had branch establishments in the colonies, and they continued to levy the 4½ per cent till it was abolished with slavery in 1838.

Of the other colonies the only ones in which duties on exports were levied in the first quarter of the 19th century, were the Mauritius (certain rates on sugar, coffee, cotton, indigo, and one or two other articles), the Cape (on all produce shipped, half the amount of the import duties on similar articles), and Ceylon (on cinnamon, etc.). These were relics from foreign rule in each case, and disappeared gradually under British rule. The export duty on cinnamon from Ceylon had an instructive history, as it was exceedingly profitable when Ceylon had almost a monopoly of that spice, it was a chief element in driving other tropical countries to compete with Ceylon, and was dropped, in 1833, too late to save the colony's pre-eminence in that export.

In India export duties were a relic of the old system: when the imperial government took over the provinces in 1857 there were export duties levied in all the presidencies, and chiefly on grain, rice, indigo, lac, opium, silk, tobacco, and native manufactures of all sorts. An act of 1860 abolished those on manufacture of wool, flax, hemp, jute, etc. At the present day those on rice, opium, and certain other commodities remain. The Indian export duty on rice has been quoted by Fawcett and others as an instance where the duty was probably justified owing to the great advantages possessed by the exporting country in the production of the commodity.

The most striking modern recrudescence of export duties was in connection with the immigration of Indian coolies to the sugar-growing colonies. One of the conditions of government aid in importing coolies was that the planters should pay their fair share; and after much discussion an export duty on sugar and the other produce of the plantations was settled as the best method of obtaining the necessary contributions. Hardly therefore were many of the West Indian colonies freed from the ancient 4½ per cent duty than they undertook a new specific duty on exportation of sugar and other produce. The St. Lucia Schedule was a fair sample, imposing duties on—

Sugar	Charcoal	Hides
Rum	Logwood	Cocoa
Molasses	Firewood	Coffee

From a return given to parliament in 1854 it would appear that then the only British colonies which levied a duty on exports were the Mauritius and the West Indian islands of St. Lucia, St. Christopher, Nevis, Montserrat, and the Virgin Islands—on sugar; and Turk's Islands on salt. But it was inevitable that a principle admitted in the case of a special service should sometimes extend itself; and in later years there has been an increased tendency to levy export duties in the West Indies. In New Brunswick, for a time, there were certain export duties on lumber, and in Prince Edward Island in 1861 a special duty was provisionally authorised to be collected for a special purpose on all agricultural produce exported. In the Bahamas so lately as 1870 and 1873 a general export duty on all produce was for a time imposed; the Virgin Islands were probably the last instance of the survival of general export duties, which were almost entirely evaded. Such duties were distinctly condemned by the royal commission which inquired into the finances of various West Indian colonies in 1883-84 (*v.* their report, pt. iv.).

Export duties have recently been levied, usually for purposes of immigration, in many of the West Indian colonies. In one or two cases they are levied under a delusive name, *e.g.* "statistical tax," in others they are indirectly increased by wharfage duties for outward goods. In Trinidad, besides the duties on products of the cane, there is an export duty on pitch. In Turk's Islands that on salt remains a chief source of revenue. New South Wales, Western Australia, and Natal levy one on gold. The Fiji Islands, for purposes of regulating the trade, levied one in 1877 on silver coin and sandalwood, and in 1887 on *bêche de mer*. Newfoundland has from time to time used an export duty on codfish as a means of taxing the merchants. The duties on pitch, gold, and salt are generally looked on as royalties and in the nature rather of a rent than a tax.

The plantations on the mainland of America appear never to have paid an export duty, and the United States maintained the tradition, which also fell in with their policy of encouraging exportation as much as possible. One feature in the commercial policy of the United States in the years round 1890 deserves special mention. In the many treaties or agreements which they were then negotiating with the Central American and other states, they carefully guarded themselves against the possibility of an export duty

being levied in the contracting state; apparently arguing that the imposition of such a duty is an attempt to raise the price to the United States consumer, and must, therefore, be treated as an unfriendly act to be punished by a counter-vailing duty.

In foreign countries duties on the exportation of commodities are still prevalent, levied sometimes on the chief product of the country, as on the charcoal and olive oil of Italy, in other cases as protective of home manufactures, as in the case of Swedish iron.

The views which have prevailed as to the incidence of export duties have been indicated in several passages above. The accepted view that the duty operates as a restriction to exportation, except where the exporting country has a monopoly of production, appears to be correct. If all countries in exporting a particular commodity levied export duties upon it the price of the commodity would be raised to cover the amount of the duty, and the foreign consumer would eventually pay the duty or the greater part of it. But as the facts are contrary to this hypothesis, it will be found in almost all cases, *e.g.* sugar exported from the West Indies —that the price paid by the foreign consumer is determined by more general considerations: the exporter cannot control it; the duty falls on him and enhances his expenses in production, or perhaps more accurately it lessens his profits. In any special case the factors which determine price are important in deciding the incidence. The case of monopoly is nowadays hardly of practical importance.

[Petty's *Treatise of Taxes and Contributions*, 1679, chap. vi.—Saxby's *British Customs*, London, 1757.—Sinclair's *History of the Public Revenues*, London, 1804, esp. pt. iii.—Jickling's *Digest of the Customs Laws*, 1815, esp. the Pref.—McCulloch *On Taxation*, 1845, bk. v.—McCulloch's edition of Adam Smith's *Wealth of Nations*, vol. iii. p. 460.—The *First Report of the Commissioners of Customs*, 1857.—Dowell's *History of Taxation and Taxes in England*, 2nd ed., 1888, bk. i. c. 5, *et passim*.—Hall's *History of the Customs*, 1885.—Various Parly. Reports and Papers.] C. A. H.

EXPROPRIATION. Expropriation may be defined as the compulsory sale of private property either to the state or to private parties who have received specific authority from the state.

That such compulsory sale is sometimes indispensable to the public welfare is too obvious to need demonstration. The necessity for expropriation can rarely arise in the case of movable property. Such articles can almost always be obtained by a voluntary transaction, if not from one owner, then from another. The acquisition of a particular movable can hardly ever be matter of necessity to the state. Even a unique picture or statue is a luxury which it is not advisable for the state to acquire at the cost of infringing upon the general freedom of an owner to dispose of his property at his pleasure. In some countries the finder of antiquities is obliged to transfer them to the state on receiving compensation. But this exceptional rule is of no economic importance. With reference to immovable property the case is different. Not only is land necessary as the basis of human industry and limited in extent, but the land suitable for a specific public purpose is often very narrowly limited indeed. In order to lay out a street or a railway, to construct a public building, a fortress, or a harbour, particular pieces of land must be obtained, even although their owners do not desire to part with them. If no compulsion were to be used in such cases the state would be reduced to offer a preposterous price or to forego a necessary improvement.

But expropriation is allowable only in order to effect an appreciable public good. All compulsion is painful, and pain should not be inflicted without a rational object. The presumption is in favour of letting every man do as he likes with his own. Therefore the burden of proof lies upon those who advocate expropriation in any particular instance.

To what extent expropriation should be carried is a wider question than that to which these remarks must be limited. We need not inquire whether the state would be justified in expropriating certain species of property on the ground that it could manage them more advantageously to the whole community than private owners could or would do. Such an inquiry belongs rather to the head of STATE INTERFERENCE (*q.v.*). Nor need we inquire here into the kindred question whether it would be right to expropriate, say, large estates in order to break them up and sell the land in small parcels so as to multiply peasant proprietors. Nor need we determine whether the state would do well to acquire certain species of property on the ground that they tend to increase in value merely through the general progress of society, and that this increase should go to enrich the community rather than individuals (see INCREMENT, THE UNEARNED). It is enough for us that the necessity of expropriation in certain cases is admitted by the great majority of persons who have considered the subject. We have only to consider upon what principles expropriation, when necessary, should be conducted.

In case of expropriation the owner should receive at least the price which he could obtain in the open market, if he were disposed to sell. The market price is the only impartial and trustworthy measure of the value of property. It represents the value of property under all the actual circumstances, including the reasonable expectations to which the laws and policy of the state have given rise. It is unworthy of a civilised government to pursue a certain class

of owners with covert hostility, to burthen them with overwhelming taxes, or to deny them effectual protection, in order to make their property worthless, and then to buy it at so many years' purchase of zero. Yet these expedients are occasionally recommended in our time by persons who profess to have a special sense of political justice. Even in the case where the state interferes to suppress a form of property distinctly condemned by the improved morality of the general public, it still owes compensation to the proprietors affected. When the British parliament compensated the West Indian slave-owners it acted on the sound principle that the state, which for many generations had recognised and maintained the lawfulness of slavery, was *particeps criminis*, and ought to take its share of the loss. But in cases of this kind the right amount of the compensation may be more doubtful than in others.

Where the owner of property expropriated has increased its returns by a violation of the law the case is different. If the owner of a house permits it to be over-crowded with lodgers, he has no right to compensation for the extra rent which he has thus received. If he lessens his outgoings by allowing the house to fall out of repair, the cost of the repairs necessary to make it habitable should be deducted from the compensation paid. If the house is so ruinous that no repair can make it habitable, he is entitled to compensation only for the site and the materials. In other words the market value, which forms the basis of compensation, must be understood as *the market value obtainable without a breach of the law*. It would be monstrous that a man should obtain compensation for relinquishing a profit which is illegal.

Subject to these qualifications, then, the amount of the compensation should not be less than the market value. But it may justifiably be somewhat more. Over and above the loss of his property, he who sells against his will suffers the pain of compulsion, and for this a reasonable allowance should be made. Distinction may be made between objects which have and objects which have not "a value of affection." Thus one acre of arable land differs from another acre of arable land only in its capacity of producing wealth. He who is compelled to sell one field is usually able to buy another field which will do just as well. But the house where a man has lived all his life may be much more to him than any other house of equal value. If compelled to sell it, he cannot buy another which will be the same to him. *Prima facie*, therefore, the indemnity for constraint put upon an owner to sell should be more liberal in this case than in the other. Compensation, however, must be assessed on general rules, and fine gradations of feeling cannot always be taken into account.

Yet another difficulty remains. The owner who is compelled to sell part of his property may have the value of the remainder greatly augmented by the public works for which the land was taken. Whether this prospective improvement should be taken into account in assessing the compensation due to him is a much-disputed question (see BETTERMENT).

The principles of compensation will be the same whether the party taking by compulsion be the national government or a municipal authority or a private joint-stock company or individual. But, when the state confers the power of expropriation upon its subordinates or upon private parties, it is entitled to determine the objects for which this power shall be exercised, the extent to which it shall be exercised, and the service which shall be rendered to the public by those who are invested with it. These, however, are points which must be determined by common sense in each case as it arises. F. C. M.

[See also EMINENT DOMAIN.]

EXTENSIVE CULTIVATION (see INTENSIVE CULTIVATION).

EXTENTS (see COURT ROLLS, MANORIAL ACCOUNTS, and EXTENTS).

EXTRANEUS. A freeman by birth coming into a manor from outside, and so opposed to *nativus*, but holding land on it by villein tenure. He could not, however, be ejected as long as he performed the services due from his holding, and he could surrender the holding at will. Vinogradoff shows (*Villainage in England*, 1891, p. 63), against Britton's theory, that the descendants of an *extraneus* might lapse into villainage in the fifth generation.

[Vinogradoff, pp. 77-82, 142.] E. G. P.

EYTON, ROBERT WILLIAM (1815-1881), was born at Wellington (Salop); graduated from Christ Church, Oxford, in 1839. He is best known as an antiquary, but his works are of value to the economist for the information they contain on the economics of the Middle Ages, and especially on the fiscal systems of the Anglo-Norman kings.

Such of his works are: *Domesday Studies* (Somerset), London, 1881.—*Domesday Studies* (Stafford), London, 1881.—*Key to Domesday*, London, 1878.—*Notes on Domesday*, London, 1880.—*The Staffordshire Pipe Rolls*, vol. i., London, 1880.

[See life in *Dictionary of National Biography*.] A. H.

APPENDIX

ADAMS

ADAMS, Henry Carter (1851-1921), teacher, economist, and statistician, was born in Iowa on December 31, 1851. Of Puritan stock, his father was of the small band of Andover theological students of Congregational faith, who set forth from New England in 1842 to spread the gospel westward. Young Adams's formal education was delayed by delicate physique, so that not until 1869 was he able to enter Denmark Academy, and thereafter to attend Grinnell College, from which he graduated in 1875. After teaching a year at Nashua, Iowa, he entered Andover Theological Seminary in 1875, in preparation for the ministry. There economic and social questions in their relation to moral reform drew his interest away from formal theology, and the purpose of entering the ministry yielded to an awakened student impulse. An extraordinary opportunity presented itself, perhaps it indeed contributed to young Adams's restlessness, in the opening of the Johns Hopkins University in Baltimore in 1876, under the brilliant leadership of President Daniel C. Gilman, with the declared plan of exclusive devotion to post-graduate work. Adams made successful application for one of the new fellowships, and spent two formative years in Baltimore in a rare company of teachers and students, receiving his doctor's degree in 1878—the first, thanks to alphabetical arrangement, conferred by the new institution. Local friends thereafter made it possible for him to continue studies in economic and social science, for the next two years, in Oxford, Paris, Berlin, and Heidelberg. In Berlin he won the friendship of Andrew D. White, President of Cornell University, at that time travelling in Germany, with the result of appointment first as lecturer and later as instructor at Cornell.

In 1886 a newspaper report of an address by Adams to the student body on the Gould railroad strike, gave offence to Henry Sage, who had made large donations to Cornell, and this led to the young instructor's dismissal. An invitation to join the faculty of the University of Michigan was accepted, and although four years later, by unanimous vote of the Cornell authorities, of which Henry Sage was still a member, Adams was asked to return to Cornell, he elected to remain in Ann Arbor. In succeeding years flattering offers came from many institutions, but Adams was firm in his loyalty, and his association with Michigan continued unbroken until his death.

Like many other American economists, Adams was deflected from a severe academic course by the appeal of public service. When Judge Thomas M. Cooley, a close personal friend, accepted the chairmanship of the newly constituted Interstate Commerce Commission, he prevailed upon Adams to undertake the organisation of a statistical bureau for the Commission. Accepting reluctantly and in the thought of temporary service, Adams became absorbed in the work, and for the next twenty years served as statistician of the body, in addition to retaining by arrangement his University connection. From time to time his services were requisitioned in related capacities. He directed the appraisal of railroad property in Michigan for tax purposes, and he figured repeatedly in valuation proceedings. In 1913 Adams accepted the invitation of the Chinese Government to devise an accounting system for its public railways, and spent two years in China for this purpose. His competence and devotion are recorded in a tablet brought to the United States and placed upon his grave on February 22, 1922, by the Chinese Delegation to the Washington Disarmament Conference. Death had come after a brief illness at Ann Arbor, on August 11, 1921.

As a teacher, Adams exerted largest influence by direct contact and personal guidance. Simplicity of manner, clearness of exposition, and sincerity of purpose distinguished his conduct of large undergraduate classes. But it was upon the smaller company of advanced students, pursuing inquiries in the fields of his prime interest, that Adams left a determining impress. No small proportion of the younger Americans now identified with scientific work in railway transportation and public finance owe inspiration to Adams's teaching.

As an economist, Adams's interest was first

aroused by the inter-relations of political economy and ethics. This impulse, with its applications to social reform, grew steadily. He delivered courses of lectures on ethics and economics at the Plymouth School of Applied Ethics, and contributed papers to the International Journal of Ethics. His interest in public finance traces to student years at Johns Hopkins, and found first expression in a doctoral dissertation on "Taxation in the United States, 1789-1816" (Johns Hopkins University Studies in Historical and Political Science, Second Series, nos. 5-6). In 1887 appeared *Public Debts*, the ablest fiscal monograph from an American economist in the post-war generation. Thereafter, at Michigan year after year, and at Johns Hopkins for a briefer term, Adams lectured upon public finance, the fruit of his labours appearing as his largest work, *The Science of Finance*, in 1899. Long delayed by the pressure of governmental service and eventually completed under pressure, the work was presented to American students as the first general exposition of public finance projected against the background of American economic and political conditions. As such it has served with Professor Seligman's brilliant teaching and inquiry to inspire a succession of American studies and texts in fiscal science. Adams was one of the group of ardent young scholars who founded the American Economic Association at Saratoga in 1885. He was a conspicuous figure in its early scientific meetings, and contributed to the first volume of its Proceedings a penetrating and influential monograph on "The Relation of the State to Industrial Action." He served with distinction as its President in 1895-96. His presidential address at the Baltimore meeting (1896) emphasised the interdependence of jurisprudence and economics, a theme to which, as to the relation of ethics and economics, he reverted repeatedly in teaching and writing.

As statistician, Adams's work was practical rather than theoretical. Drawn by unexpected circumstances into the field, he succeeded, as statistician of the Interstate Commerce Commission, in evolving a system of uniform railway classification and accounting, and integrating statistical service with governmental regulation. He accomplished this by a rare mixture of technical competence, administrative ability, and personal force. He made no contribution to statistical science as such; but "the universal acceptance to-day of statuted accounting and statistical practice as an indispensable instrument for the effective regulation of railroads and public utilities remains a lasting monument to the intelligence and validity of his pioneering efforts." The results of his experience were set forth in *American Railway Accounting* (1918).

["Henry Carter Adams: Memorial presented to the Senate of the University of Michigan," by S. L. Bigelow, I. L. Sharfman, R. M. Wenley, chairman, with bibliography of publications compiled by Sharfman (*Journal of Political Economy*, April 1922). "Memorial to Former President Henry C. Adams;" tributes by R. T. Ely, E. R. A. Seligman, C. H. Cooley, F. H. Dixon D. Friday, I. L. Sharfman, J. B. Clark, F. H. Giddings, J. H. Hollander (*American Economic Review*, September 1922); "Henry Carter Adams": an obituary note, by E. R. A. Seligman (*Economic Journal*, June 1922.]

J. H. H.

AGRICULTURAL HOLDINGS ACTS.* Between 1883 and 1921 various acts were passed, which were replaced in 1923 by a consolidating statute repealing all previous enactments on the subject and embodying in one act, viz., the Agricultural Holdings Act 1923, the present statutory law regulating the relations of landlord and tenant on agricultural and market garden holdings. The principal provisions of this act may be summarised under seven heads: (*a*) Compensation for improvements, (*b*) compensation for damage by game and for disturbance, (*c*) arbitration, (*d*) fixtures, (*e*) notices to quit and other miscellaneous rights of landlord and tenant, (*f*) distress, (*g*) special provisions as to market gardens.

(*a*) It is provided that the tenant of agricultural land shall be entitled on quitting the holding to compensation for improvements made by him at his expense during his tenancy. The act in the first schedule enumerates three classes of improvements. The first class are improvements of a permanent nature, such as the erection of farm buildings, laying down of permanent pasture, making of gardens, and planting of orchards, for which compensation can only be claimed if the landlord has given a previous consent in writing. The second class is drainage, to obtain compensation for which the tenant must have given notice of his intention to execute to the landlord, who has then the option of executing the work himself, charging the tenant interest on his outlay. The improvements comprised in the third class are such as tend to the temporary improvement and fertility of the land, such as chalking, liming, application of purchased artificial or other purchased manure, and laying down of temporary pastures with clover, grass, sainfoin or other seeds, also repairs to buildings necessary for the proper cultivation or working of the holding. No consent by the landlord to improvements in the third class is required. The sum payable for compensation for an improvement in any of these classes is the value of the improvement to an incoming tenant.

(*b*) A tenant who has sustained damage to his crops from deer or winged game, the right

to kill which is vested in the landlord, is entitled to recover from the landlord compensation for such damage if it exceeds the sum of one shilling per acre. A tenant is also given a very important right to compensation for disturbance if he quits his holding by reason of a notice to quit given by the landlord. This is to compensate him for the loss or expense attributable to quitting incurred upon or in connection with the sale or removal of his household goods, implements, fixtures, farm produce or farm stock, and to avoid disputes is to equal one year's rent of the holding, unless the tenant can prove that his loss or expense exceeds that sum, up to a maximum equal to two years' rent of the holding. He will, however, lose this right to compensation if it is shown that he was not cultivating his holding according to the rules of good husbandry which are defined in the act, or has failed to pay his rent within a reasonable time when demanded, or to remedy a breach of his contract of tenancy, or to submit to arbitration as to the rent payable for the holding, and in certain other cases. This right of the tenant, as well as his right to compensation for improvements, cannot be excluded by agreement.

(*c*) Any question or difference arising out of any claim by the tenant of a holding against the landlord for compensation under the act, or any claim by the landlord for breach of contract, and any other question or difference between the landlord or tenant arising out of the termination of the tenancy must necessarily be referred to the decision of a single arbitrator, who has the power of stating a case for the opinion of the county court on any question of law arising in the arbitration, but whose decision otherwise is final.

(*d*) Any engine, machinery, fencing or other fixture, and any building which the tenant affixes or erects without being obliged to do so, may be removed by an outgoing tenant unless the landlord (to whom notice must be given) elects to purchase them at a fair value to an incoming tenant.

(*e*) A notice to quit a holding coming under the act and held on a yearly tenancy will be void if it purports to terminate this tenancy before the expiration of twelve months from the end of the then current year of tenancy, but there is exempted from this enactment notice given under a provision in the contract of tenancy authorising the resumption of this holding or part of it for a specified purpose not being the use of the land for agriculture. Even in the case of leases for two years and upwards the tenancy will not terminate on the expiration of the term unless at least one year's notice to terminate the tenancy has been given, and if no such notice is given the tenancy will continue as a yearly tenancy. On the making of any contract for sale of a holding or part of a holding, any then current and unexpired notice to determine the tenancy given to the tenant, if the contract for sale is made by the person by whom the notice to quit is given, is made null and void. Notwithstanding any custom of the country or agreement to the contrary, a tenant is entitled to practise any system of cropping of arable land on his holding, and to dispose of the produce of the holding, as he thinks fit. He is bound, however, to exercise his rights so as not to deteriorate the holding in any way, and during the last year of his tenancy he must comply with the terms of his agreement or the custom of the country.

(*f*) In the case of holdings coming under the act, the right to distrain is limited to one year's rent. Live stock taken in to be fed at a fair price are exempted from distress, if other sufficient distress is to be found, and cannot in any case be distrained for a sum exceeding the amount remaining due from the owner for the price of feeding. Hired machinery, and live stock belonging to another person which is on the premises solely for breeding purposes, may not be distrained at all.

(*g*) The third schedule to the act contains a list of improvements likely to be made on market gardens which comprises the planting of standard or other fruit trees, the planting of fruit bushes, strawberry plants, and asparagus, rhubarb, and other vegetable crops which continue productive for two or more years, and the erection or enlargement of buildings for the purpose of the trade or business of a market gardener. If it has been agreed in writing that the holding shall be let or treated as a market garden, the tenant may obtain on quitting compensation for any of these improvements made by him without the previous consent of his landlord. Moreover, if a tenant is desirous of making any of these improvements and the landlord refuses to agree that the holding shall be let or treated as a market garden, the tenant may apply to the County Agricultural Committee for the area in which the holding is situate, and they may direct that the provisions of the act as to market gardens shall apply, but in that case if the tenancy is terminated by notice to quit from the tenant he will be entitled to obtain his compensation from an incoming tenant and not from the landlord, unless the latter refuses to accept a substantial and suitable person willing to pay the compensation and accept a tenancy on conditions similar to those under which the outgoing tenant held.

The act does not apply to Scotland, for which country a similar act was passed in the same year. A. J. S.

AGRICULTURE AND FISHERIES, MINISTRY OF. The Ministry of Agriculture and Fisheries was constituted pursuant to the

Ministry of Agriculture and Fisheries Act 1919, which amended the Board of Agriculture and Fisheries Acts 1889 to 1909. Under the Small Landholders (Scotland) Act 1911, all functions of the Board of Agriculture and Fisheries, so far as Scotland was concerned, had been transferred to a separate Board of Agriculture for Scotland except the administration of the Diseases of Animals Acts. Powers and duties of both the Board of Agriculture and Fisheries, and the Board of Agriculture for Scotland, in relation to forestry were transferred in 1919 by the Forestry Act 1919 to the Forestry Commissioners.

The Ministry of Agriculture and Fisheries has had no jurisdiction in Ireland except in relation to the Ordnance Survey, and these functions were transferred to the respective Governments of Northern Ireland and the Irish Free State in 1922.

The jurisdiction of the Ministry includes the Royal Botanic Gardens, Kew.

The Ministry is presided over by a Cabinet Minister—the Minister of Agriculture and Fisheries—who is responsible to Parliament for its policy and operations. Among the Acts administered by the Ministry are the Fertilisers and Feeding Stuffs Act 1906, the Butter and Margarine Act 1907, the Smallholdings and Allotments Acts 1908-1919, the Allotments Act 1922, the Sale of Food and Drugs Acts so far as they relate to articles affecting the interests of agriculture, Tithe Acts 1836-1918, Diseases of Animals Acts 1914-1922, and the Destructive Insects and Pests Acts.

[See BOARD OF AGRICULTURE.] C. R. W.

ALIEN IMMIGRATION. By the Aliens Act, 1905, it is enacted that no "immigrant" as defined in the Act shall be landed in the United Kingdom from an "immigrant ship" (also there defined), except at a port at which there is an immigration officer appointed under the Act, or shall be landed at any such port without the leave of that officer given after an inspection of the immigrants made by him on the ship, and that the immigration officer shall withhold leave in the case of any immigrant who appears to him to be an "undesirable immigrant," as therein defined; but that the Secretary of State for the Home Department may, subject to such conditions as he thinks fit to impose, make "exemption orders," relieving particular immigrant ships from the abovementioned provisions, if he is satisfied that a proper system is being maintained for preventing the embarkation of undesirable immigrants on these ships, or if security is given to his satisfaction that undesirable immigrants will not be landed in the United Kingdom from those ships except for the purpose of transit; and he may also, if he thinks fit, make "expulsion orders," requiring particular aliens to leave the United Kingdom within a time fixed by the order, and thereafter to remain out of the United Kingdom on certain prescribed facts being proved in a certain prescribed manner. The expression "immigrant" is defined as meaning an alien steerage passenger (not being a "transmigrant"), who is to be landed in the United Kingdom, and the expression "steerage passenger" as including all passengers except such persons as may be declared by the Secretary of State to be "cabin passengers," by order made either generally or as regards any special ships or ports. Pursuant to the Act, the Secretary of State has made numerous exemption orders relieving second-class passengers from inspection, upon the shipowners giving security by bond not to land any undesirable immigrants from among such passengers, and has also made a general order declaring all such passengers as are entitled to use the cabins, state-rooms, or saloons, where the accommodation is superior to that provided in any other part of the ship devoted to the carrying of passengers, to be cabin passengers for the purposes of the Act (Aliens Act, 1905). It appears from the parliamentary return showing the result of the first year's working of the Act, that for the twelve months ending 31st December 1906, out of a total of 465,500 alien passengers, 493 were finally refused leave to land, and expulsion orders were made in 287 other cases. And it appears from the first annual report of H.M. Inspector under the Act that, after making the necessary deductions for cabin passengers, exempted second-class passengers, transmigrants, and others who are not within the Act, only 38,527 of the 465,500 alien passengers are left unaccounted for. Of these, 22,986 were males, 11,049 females, and 4492 children. Russians and Poles numbered 12,832; French, 10,116; Italians, 5360; Germans, 3186; Norwegians, Swedes, and Danes, 1295; Austrians, Hungarians, and Bohemians, 1223; Swiss, 983; Dutch, 798; Spaniards and Portuguese, 572; Americans (U.S.), 552; Belgians, 380; and other nationalities, 1230. The total number of aliens who received Poor Law relief during 1906 in London and certain provincial unions was 6050, and the number sent to lunatic asylums was 266. As pointed out in the report, the statistics of convicted prisoners already yield indications that the liability to expulsion created by the Act is exercising considerable influence. For the alien prison population, which had reached its highest point in 1904, having increased ever since 1893, and at a greater rate than the total prison population, suddenly dropped in 1905 by 7·01 as compared with a fall of only 1·12 per cent in the total number of prisoners, and this change, which is suggested to have been due to the shadow of the coming Aliens Act, was continued and accelerated in 1906, the first year of the operation of the

Act, when the total number of convicted persons received into prison fell by 6·32 per cent, while the number of aliens among them fell by 16·85 per cent, leaving the proportion of aliens to the total number at 1·85 per cent, the lowest figure since 1899. (*Aliens Act, 1905, First Annual Report of H.M. Inspector under the Act, c. 3473.*) (*Parl. Papers, c. 3316 of 1907.*) T. G. S.

ALLOTMENT.* The Allotments Acts of 1887 (50 and 51 Vict. c. 48) and 1890 (53 and 54 Vict. c. 65) and the provisions regarding allotments contained in the Local Government Act 1894 (56 and 57 Vict. c. 73) and the Small Holdings and Allotments Act 1907 (7 Edw. VII. c. 54) were consolidated into the Small Holdings and Allotments Act 1908 (8 Edw. VII. c. 36). These Acts constituted an attempt to enable any suitable person of the labouring population to obtain access to a piece of land for cultivation in his spare time. The legislation was progressive in the direction of ensuring that authorities responsible for the provision of allotments, viz. the Borough, Urban District, and Parish Councils, and Parish Meetings, should possess powers of compulsory acquisition of land for use as allotments if they were unable to acquire by agreement, and that if the allotment authority of first instance did not carry out its duties, a higher authority, the County Council or the Board of Agriculture and Fisheries, could act in default. In 1914 the number of allotments in England and Wales was estimated at 580,000, with a total area of 130,000 acres.

The greatest extension of the allotment movement, especially in and around the cities and towns, came during the Great War in 1916 and 1917, after the threat of scarcity of food had been fully realised. Under the Defence of the Realm Regulations powers were taken by the Board of Agriculture and Fisheries to enter on land for the purpose of cultivation, with a view to maintaining the food supply of the country, and certain of these powers were delegated to Local Authorities for the provision of allotments. It is estimated that the number of allotments in England and Wales rose in 1917-18 to 1½ million, comprising over 200,000 acres, the large increase being almost entirely in the urban districts. With the view of maintaining the movement after the war, certain provisions of the Land Settlement (Facilities) Act 1919 (9 and 10 Geo. V. c. 59) assisted in the acquisition of land for allotments, and gave additional powers of letting to County Councils. The Act also removed the restriction confining the provision of statutory allotments to the labouring population. In 1920, the estimated number of allotment holders in England and Wales was 1,330,000 (Annual Report, Ministry of Agriculture and Fisheries, H.M. Stationery Office, 1921). With the near approach of the termination of the War Emergency Legislation, a Departmental Committee on Allotments was appointed in 1921, and as a result of their report (H.M. Stationery Office, 1922), the Allotments Act 1922 (12 and 13 Geo. V. c. 51) was passed, which contained provisions enabling urban local authorities to enter on unoccupied land without the owner's consent, for the purpose of providing small allotments. The Act also provided that, in the large cities and towns, the local authority should set up an allotments committee, comprising non-members of the Council representative of the interests of allotment holders. The Act also enabled costs of acquisition of land and sinking fund charges in respect of loans for the purchase of the land, to be met out of the rates, and settled the basis of compensation for crops and unexhausted manures to allotment holders on dispossession. For the first time in allotments legislation, restrictions were imposed by the Act on the right of landlords to terminate the tenancies of allotment gardens, whether let direct by them, or through the Local Authority, the Act being based apparently on the contention that this interference with private interests was justified by the national importance of providing garden plots for the dwellers in urban districts with some security of tenure to enable the plot-holders to reap the reward of their labours.

Under modern conditions allotments can be divided into two classes, the small allotment or allotment garden, worked by a resident in a town or village for the production of vegetable and fruit crops for consumption by himself or his family, and the larger parcel of land by which the rural labourer seeks to add to his earnings by keeping pigs, poultry, etc., and selling surplus produce. The total number of allotment holders in England and Wales in 1923 was estimated to be 1,190,000 (Annual Report, Ministry of Agriculture and Fisheries, 1924). In the urban districts of England and Wales they are well organised by means of societies and federations affiliated to a national union, and are now in a position to exercise a considerable amount of political influence. As to the social and economic advantages of allotments, see in particular the Report of the Departmental Committee, 1922, quoted above. (For an account of the present law, see *The Law of Allotments and Allotment Gardens*, E. Lawrence Mitchell, Third Edition, London, 1922.) E. L. M.

ALLOY.* Since the war, silver alloys of low fineness have been used in the coinage in a number of countries. In 1920 England reduced the standard of silver coin to 500, and France, Italy, Germany, and some other countries have ceased to coin silver. Japan,

Holland, and Mexico have adopted the standard of 720. On the other hand the United States have maintained the standard of 900, and India that of 916·6.

According to the experience of the past, silver coins of low standard have not been satisfactory, owing to rapid tarnishing and corrosion in circulation. It is now known that the wear of coins is a function less of simple abrasion, which depends on hardness and toughness, than of atmospheric corrosion followed by attrition, which depends on composition. It follows that coinage alloys of silver of low standard are not likely to be durable in circulation, in which the coins are subjected to oxidation and attack by acids contained in the air of towns and by the acids of grease. The results caused low standard silver for coins to be abandoned generally, the last nation to come into line being Germany in 1871. The only exceptions remaining were certain small subsidiary coins in Russia, Scandinavia, Holland, and China. It remains to be seen whether the lower standards adopted since the war will stand the test of time. So far, in England, the coins of the 500 standard have tarnished when stored and have become gradually cleaner when in active circulation. Their rate of wear is not yet known. T. K. R.

AMERICAN SCHOOL OF POLITICAL ECONOMY.* The development of economic thought in the United States has been unattended by "an alliance of persons, a community of ideas, an acknowledged authority and a combination in purpose" (Higgs, *Physiocrats*, 3)—the earmarks of a scientific school.

The ardent protectionism of the '20's, centring in the Harrisburg Convention (1827), won from Friedrich List, in designation of the rebound from Adam Smith's "cosmopolitanism," the term "American Political Economy" (M. E. Hirst, *Friedrich List*, 1907). Similarly, the economic optimism of Henry C. Carey, with its thorough-going rejection of the Ricardian theory of rent, the Malthusian principle of population and the wider implications of the classical political economy, has been described as meriting "with more propriety the term American school" (Taussig, *American School of Political Economy*, *supra*, p. 38). but List's phrase obviously points to an episode in political history rather than to a movement in political economy (Taussig, *supra*); and Carey's service was penetrating criticism, inspired by local and temporary conditions, rather than constructive doctrine or enduring influence.

It is clear, nevertheless, that the distinctive features of American economic environment, political structure, social composition, and educational method have exerted definite impress upon economic thought and writing in the United States. In this sense there is warrant for the term "American School."

1. Colonial Period (1607-1776). Economic opinion found expression in the early life of the American plantations in open discussion, legislative debate, pulpit utterance, and newspaper controversy. Economic problems were limited and localised, and intellectual life drew sustenance from the Old World. There was no counterpart to the mass and variety of English seventeenth and eighteenth century economic writing. Nothing remotely approaching a treatise appeared, and the pamphlet literature consists of a handful of tracts evolved by the motley currency ventures of New England, Pennsylvania, and the Carolinas, together with scattered issues on trade, taxes, and husbandry, and random allusions in current historical and political writings.

A single exception was William Douglas—"the honest and downright Doctor Douglas" (*Wealth of Nations*, bk. ii. chap. 11)—a native of Scotland who settled in Boston in 1718, and thereafter wrote informative pamphlets upon the economic affairs of the colonies, particularly as to monetary policies. Adam Smith drew repeatedly upon Douglas' *Summary of the British Settlements in North America* (1755) for particulars as to the paper currencies of the colonies, and M'Culloch —although unacquainted with its authorship —reprinted, as the first of his *Scarce and Valuable Tracts on Paper Currency* (1857), Douglas' *Discourse concerning the Currencies of the British Plantations in North America* (1751), as of "the highest excellence."

2. National Beginnings (1776-1812). In the generation that saw the birth of the new republic, the outstanding exponents of economic opinion, as of political thought, were Benjamin Franklin, Thomas Jefferson, and Alexander Hamilton. Of these, Franklin, "the first American who deserves to be dignified by the title Economist" (Wetzel, *Benjamin Franklin as an Economist*, 1895, p. 56), had already won distinction as philosopher and man of letters before his first foreign mission in 1757-62 as agent of Pennsylvania. His economic opinions were set forth in tracts evoked by current controversies and in familiar precepts as to personal and social conduct. In *Nature and Necessity of Paper Currency* (1729) the neo-mercantilist contention inspired by Petty and destined to receive its quietus a few years later from David Hume, that "a plentiful currency will make rates of interest low and will promote immigration and home manufactures," supported the colony's policy of further paper emissions. Franklin records naïvely that his political friends "who considered I had been of some service thought fit to reward me by employing me in printing the money, a very profitable job and a great

help to me." Parliamentary opposition to colonial manufactures, culminating in Townshend's committee of inquiry and the restrictive measure of 1750, evoked *Observations concerning the Increase of Mankind and the Peopling of Countries* (1751), wherein Franklin urged that the vast area of cheap land, relative to the maximum increase of population, would prevent the American colonies from competing industrially with the mother country. Curiously enough, like Malthus' *Essay on Population*, of which it was the prototype, the major thesis was less influential than the supporting arguments. Adam Smith adopted Franklin's estimate of the rate of increase of population in the American colonies; Malthus requisitioned illustrative material and received suggestion or encouragement as to the effect of a higher standard of life serving as a preventive check; Godwin grumbled that "a great name goes with me for nothing." Franklin's largest influence as an economic thinker and social philosopher was exerted during this period by the homely maxims and common-sense homilies as to "the art of virtue" appearing year after year in *The Pennsylvania Gazette* and *Poor Richard's Almanack*, of which he was editor and publisher. It was this, like Hume's *Moral Discourses*, which won him prestige at home and recognition abroad. The later phase of Franklin's economic career grew out of European contacts. From 1757 to 1775, barring a brief return to America in 1762, he resided abroad as agent of the colonies. Philosophical circles and literary coteries vied in honouring him. In England he met Lord Kames, Dr. Robertson, David Hume, and Adam Smith, and spread knowledge of the problems and aspirations of the colonies, supported by economic reasoning always intelligible and rarely unsound. In Paris he associated with Quesnay, Mirabeau, Du Pont, and Turgot, and carried back to America the impress of their tenets, while perhaps giving something in exchange.

Primarily jurist and publicist, Thomas Jefferson's interest in the educational value of economic principles and his appreciation of the importance of their wide diffusion in a democracy, were more significant than his positive contribution. As a youth "the acquaintance and familiar table" of Governor Francis Fauquier may be supposed to have stirred his interest in economic doctrine in relation to colonial grievances. Exchanging legal practice for political activity and becoming a central figure in the struggle with England and in the formative period which succeeded, economic problems engaged him, even though judicial reform, political structure, educational organisation were his more evident tasks. As in the case of Franklin, residence in Paris (1784-89) and contact with the leaders of economic thought, Morellet, Turgot, Lafayette, Du Pont de Nemours, and Destutt de Tracy, profoundly influenced Jefferson. In particular, Tracy's strictures upon Montesquieu appealed to him. At his suggestion Tracy in 1798 wrote a commentary upon *The Spirit of Laws*, which Jefferson, ex-President and "sage of Monticello," translated and published in Philadelphia in 1811. So, too, in 1813 Tracy sent the manuscript of his *Treatise on Political Economy* to Jefferson, who induced Duane to translate and Milliken to publish it.

As Franklin gave popular currency to economic principles and Jefferson made familiar the scope and purpose of economic science, so Alexander Hamilton left enduring impress upon the economic institutions of the young republic (Harrower, *Alexander Hamilton als Nationalökonom*, 1887). A veritable prodigy in the variety and quality of his youthful performances, he threw himself into the Revolutionary struggle, serving as confidential aide to Washington and later winning distinction in field command. Acquaintance with economic and financial texts was tested by service as continental receiver for taxes for New York and as a member of Congress and by legal practice. He made deliberate study of Adam Smith, and is said to have written "an extended commentary"—unfortunately not preserved—on the "Wealth of Nations" (Bourne, "Alexander Hamilton and Adam Smith," in *Quarterly Journal of Economics*, viii. 328). In 1789, upon the inauguration of the new government, Hamilton, then in his thirty-second year, became secretary of the treasury in Washington's cabinet, Robert Morris—the financier of the Revolution—declining the post on the ground that Hamilton was the "man best fitted to meet its problems." In the six years of incumbency Hamilton fairly established the financial basis of the republic by a series of state papers, for the most part promptly translated into practice. His genius in adapting sound principles and tested devices of public finance to the needs of the young country (Dunbar, "Some Precedents followed by Hamilton" in *Quarterly Journal of Economics*, iii. 32) ranks his financial achievement with the military talent of Washington and the judicial capacity of Marshall. As fiscal administrator he introduced sound practices of accounting into the exchequer. His report on Public Credit (1790) led to the rehabilitation of the republic's borrowing power. The paper on a National Bank (1790) resulted in the creation of the Bank of the United States. The report on Establishment of a Mint (1791) defined the monetary system of the country. The report on Encouragement and Protection of Manufactures proved an arsenal of arguments for a national protective system. In all of these particulars, economic establishments were

justified by able reasoning tinctured by practical wisdom.

The economic aftermath of the War of Independence evoked numerous pamphlets, a few, like Pelatiah WEBSTER's *Nature and Operation of Money* (1791), S. Gale's *Essays on Public Credit* (1784), and Tench COXE's *View of the United States* (1794), ranking as substantially more than tracts of the time.

The standard set by Hamilton in the Treasury was sustained by Oliver Wolcott, and conspicuously by Albert GALLATIN. As publicist and anti-Federalist, Gallatin had won recognition in fiscal matters by his *Sketch of the Finances of the United States* (1796) and his *Views of the Public Debt, Receipts and Expenditures* (1800), and by insistence upon directness and economy in public financing. When Jefferson assumed the presidency, Gallatin was summoned to the Treasury. "Wise, prudent, and conservative, Gallatin made few changes in Hamilton's arrangements, and for twelve years administered the national finances with the greatest skill" (Henry Cabot Lodge in *Ency. Brit., sub nom.*). Retiring from public life in 1827, to become an influential figure in American banking, his continuing interest in financial principles appeared in *Considerations on the Currency and Banking Systems of the United States* (1831), and *Suggestions on the Banks and Currency of the several United States* (1841), urging the maintenance of specie payments; and in *Memorial of the Free Trade Convention* (1832) presenting the arguments in favour of free trade. As an economist Gallatin probably ranks higher than Hamilton, though not as a constructive statesman.

3. INTERNAL DEVELOPMENT (1816 - 61). The Treaty of Ghent left the Republic secure from foreign involvement and free to work out its own economic development. The doctrinal counterpart was an ineffectual challenge of the transplanted classical political economy by a native economic philosophy reflecting the immediate environment—together with widening and more competent monographic treatment of current economic affairs.

The infiltration of European economic thought, in particular of the French post-physiocratic group and of the English classical school, was hastened by Jefferson's patronal support of American translations and reprints and by the enterprise of Georgetown, Philadelphia, and Hartford publishers. An American edition of the *Wealth of Nations* had appeared as early as 1789 (a second reprint in 1811, and a third in 1818), and of Godwin's *Political Justice* in 1796. In 1809 Malthus' *Essay on Population* (3rd edition) was reprinted, and in 1831 the *Additions* to the Essay. Ricardo's *Principles of Political Economy* was reprinted in 1819, despite Jefferson's warning to the publisher that "the reputation of the work will, I think, fall as soon as it comes to be read." Destutt de Tracy's *Montesquieu* appeared in 1811 and his *Political Economy* in 1817. A translation of Say's *Traité* was printed in 1821 and a second edition, with introduction and notes, by Clement C. Biddle, in 1824. Mrs. Marcet's *Conversations* was reprinted in 1817 and again in 1828, and M'Culloch was edited by M'Vickar in 1825.

In train of these reprints followed a series of manuals, written often by clergymen, ordinarily as college text-books, and in the main paraphrasing the current doctrines of the English school. Thomas COOPER, the English radical, as professor of chemistry and political economy at South Carolina College, published his *Lectures on the Elements of Political Economy* in 1826 and his *Manual of Political Economy* in 1834. John M'Vickar, already referred to, issued from his chair of philosophy and political economy at Columbia College *Outlines of Political Economy* (1825) and *First Lessons in Political Economy* (1835). Samuel Phillips Newman lectured on political economy at Bowdoin College and wrote *Elements of Political Economy* (1835) —"little more than a compendium of ideas, somewhat ill digested, gained from a reading of *The Wealth of Nations.*" Henry VETHAKE's *Principles of Political Economy* (1838) embodied the substance of class lectures delivered at the colleges with which he was successively connected. More important in circulation and influence was Francis WAYLAND, theologian and for a generation president of Brown University, whose *Elements of Political Economy* (1837) found wide acceptance as a college text-book up to and even after the Civil War.

Dissent from the doctrines of the ENGLISH SCHOOL first appeared, reflecting Alexander Hamilton's influence, in advocacy of protectionism. Matthew CAREY, who had emigrated from Ireland for political reasons and established himself in Philadelphia as a successful journalist and publisher, became a prolific writer on economic matters and, from 1820 on, "the most active among the advocates of protectionism in the United States." As president of the Pennsylvania Society for the Promotion of National Industry, as patron and sponsor of Friedrich List and Daniel Raymond, and as author of economic pamphlets and political tracts (J. W. Jenks, *Henry C. Carey als Nationalökonom*, 1885), Carey did much to cast doubt upon the local applicability of the English classical doctrines.

The first substantial treatise to show an intellectual independence begotten of American conditions was Daniel Raymond's *Elements of Political Economy* (1820; 2nd edit., 2 vols., 1823). A briefless member of the Baltimore

bar, Raymond sought relief from tedium "in putting on paper some of my thoughts on political economy" as "an humble effort to break loose from the fetters of foreign authority; from foreign theories and systems of political economy, which, from dissimilarity in the nature of the governments, renders them altogether unsuited to our country" (Preface). Acquainted with the writings of the English school and influenced appreciably by Lauderdale's work, Raymond's purpose was not to restate the general body of economic principles, but to establish a doctrinal basis for his bitter hostility to the practical applications of the classical economics. Antagonism to the prevailing individualistic philosophy, economic and political, pervaded his system—"it leaned to governmental interference in opposition to *laissez faire*, stood for protective tariffs, decried banks and paper money, and hurled anathemas at slavery as an economic evil" (Neill, *Daniel Raymond*, 1897). Raymond's book attracted some attention and enjoyed moderate circulation, a third edition being issued in 1836 and a fourth in 1840. Matthew Carey's admiration went to the length of offering to maintain a professorship of political economy at the University of Maryland, of which Raymond was to be the incumbent. Whether Friedrich List derived direct suggestion from Raymond remains a moot question, with the weight of probability inclining to the affirmative (Neill, *op. cit.* chap. iv.).

Resistance to the classical doctrines of population and rent, in the light of American conditions, appeared in A. H. Everett, *New Ideas on Population* (1823); in I. N. Cardozo, *Notes on Political Economy* (1826); in Willard Phillips, *Manual of Political Economy* (1828). In 1829, T. R. Dew, professor and later president of William and Mary College, published *Lectures on the Restrictive System*, delivered to "the Senior Political Class" of the College. In the succeeding decade, renewed qualification of the English classical doctrines appeared in A. Potter, *Political Economy: Its Objects, Uses, and Principles* (1840)—described by Seligman as "largely an adaptation of Poulette Scrope"; in N. A. Ware (*A Southern Planter*), *Notes on Political Economy* (1844); in Calvin Colton (in later life professor of political economy at Trinity College, Hartford, Connecticut), *Public Economy for the United States* (1848); and in George Opdyke, *Treatise on Political Economy* (1851). John Rae's *Statement of Some New Principles on the Subject of Political Economy* (1834) avowed the author's deep "conviction of the unsoundness of the system maintained in the *Wealth of Nations*." Rae presented an acute theory of capital and an effective defence of the protective system, and his work was cited by J. S. Mill and Hearn (reprinted in 1905, with biographical sketch and notes, by C. W. Mixter).

The outstanding figure in the "nationalist" group was Henry C. Carey. No other American economist, with the possible exception of Francis A. Walker, has exercised so wide a doctrinal influence or left so definite an impress upon the development of the science. The son of Matthew Carey (*supra*), he retired from business in mid-life to devote himself to economic speculation. In 1835 appeared *Essay on the Rate of Wages*, followed by *Principles of Political Economy* (1837-40); *The Past, the Present, and the Future* (1848); *The Harmony of Interests* (1850); *Principles of Social Science* (1858-59). "Carey started out as a free trader, but soon became an ardent protectionist and took issue at almost every point with the doctrines of the classical school. He opposed Adam Smith on the theory of productive labour; he objected to the Ricardian theories of rent and wages; he criticised the Malthusian theory of population; he laid stress on his own law of value and utility; and he elaborated, on original but none the less secure foundations, a whole structure of economic thought. At a time when the field was occupied by the American imitators of British classical political economy and by the widely read translation of Bastiat, the French free trader, Carey heartened all those both at home and abroad who were seeking some economic basis for the newer nationalism with its policy of protectionism" (Seligman in *Cambridge History of American Literature*, vol. iv.),

Current economic issues evoked a mass of descriptive and controversial literature, much of it ephemeral but marked on the whole by increasing competence. The labour movement, Fourierism, the tariff controversy, banking and currency policies were the important subjects of discussion. In 1839 the American Statistical Association was founded, synchronising with this new spirit.

The economic aspects of slavery interested such writers as Dew, Harper, Ruffin, Helper, and Olmsted.

4. Transition (1861-76). The declining interest in political economy in England in the post-classical period found its counterpart in the United States in mid-century stagnancy. The "nationalistic" spirit had shot its bolt; Mill's *Principles*, immediately reprinted and widely circulated in the United States, was accepted as doctrinal finality; tariff, currency, and banking controversies had yielded to sectional debate; positive inquiry was dormant, and such interest as appeared was appeased by text-books designed primarily for college use.

George Tucker, who held the professorship of moral philosophy and political economy

in the University of Virginia from 1825 to 1845, and who had dissented acutely from the Ricardian doctrines in *Law of Wages, Profits and Rent Investigated* (1837), continued to exercise influence in the South through his *Political Economy for the People* (1859). In Philadelphia the interest in economic studies, which Matthew and Henry C. Carey had aroused, was sustained by the contributions of William Elder, E. Peshine Smith, Robert Ellis Thompson, and Stephen Colwell. A. L. Perry taught political economy at Williams College, and wrote primarily for class-room use *Elements of Political Economy* (1865) and *Introduction to Political Economy* (1877). Accepting with some variations the doctrines of the English school and recording the great influence exerted upon him by Bastiat's *Harmonies* ("I had scarcely read a dozen pages in that remarkable book when the field of the science in all its outlines and landmarks lay before my mind just as it does to-day"), Perry's manuals, distinguished by clearness of expression and simplicity of exposition, were widely read and studied. Francis Bowen, editor, man of letters and for many years professor at Harvard, embodied the substance of pamphlet writing and class-room lecturing in *Principles of Political Economy* (1856). Reprinted many times (in 1870 under the title *American Political Economy*), Bowen's work, with Tucker's, Wayland's, Vethake's, and Perry's, continued for a generation the familiar texts of economic instruction in the United States. Perry's successor at Williams was John Bascom, whose long academic career included economic manuals (*Political Economy*, 1859; *Social Theory*, 1895), clearly exhibiting "the college professor who was devoted to theology and philosophy, acquired his knowledge and bent in economics from the classical texts rather than from a touch with practical affairs" (Turner, *op. cit.* 178). In sharp contrast was the work of his friend and admirer Amasa Walker (*The Science of Wealth*, 1866). Viewing political economy as "emphatically a business science," Walker's book was "little more than a comprehensive treatise of money and finance." A naïve sentence of the preface to an abridged edition (1872) "for popular reading and use as a text-book," illumines the current state of the science: "Although desirable that the instructor should be familiar with the subject himself, it is by no means indispensable. With a well-arranged text-book in the hands of both teacher and pupil, with suitable effort on the part of the former and attention on the part of the latter, the study may be profitably pursued. We have known many instances where this has been done in colleges and other institutions, highly to the satisfaction and advantage of all parties concerned" (Preface, vii.; quoted in R. T. Ely, *The Past and the Present of Political Economy*, 1884).

In the decade (1865-75) following the close of the Civil War economic thought and writing centred about lay discussion of problems of financial and industrial reconstruction. Influential in developing the internal revenue system of the country, David A. Wells emphasised the great economic changes impending. The same note of optimism was struck by Edward Atkinson. Sound views on currency and banking were expressed by Horace White. In all of these the dominant quality was intimacy with contemporary detail and absorption in current problems rather than interest in historical development or concern with general principles. Scientific traditions were courageously sustained in a few professional chairs where economic instruction had broken from the time-honoured formulae. At Yale, William G. Sumner lectured on the history of protection and projected the perilous state of the American currency against the English restriction experience. At Harvard, Charles F. Dunbar initiated fruitful studies of the financial history of the United States; at Johns Hopkins, Simon Newcomb, the astronomer, pursued financial and economic studies as an avocation, culminating in *Principles of Political Economy* (1886). Evidence of growing interest in the formal science appeared in a partial translation (1878, 2 vols., ed. John J. Lalor) of Roscher's *System der Volkswirtschaft*; in a translation (1880, preface by David A. Wells) of Blanqui's *Histoire de l'économie politique en Europe*, and in a three-volume *Cyclopaedia of Political Science and Political Economy* (1883; ed. by John J. Lalor).

More notable than all of the foregoing as an exhibit of environment modifying doctrine was the work and influence of Henry George. Unscientific in method and extravagant in conclusion, no other American thinker has exercised so much influence upon economic thought and action in this country and abroad. Living in California at a time when valueless land was swiftly acquiring sensational site value with increasing population, George, first in *Our Land and Land Policy* (1871), and more fully in *Progress and Poverty* (1879), presented a closely integrated, eloquently phrased economic philosophy, wherein wealth was imputed to the growth of land value, and release was proposed by the public appropriation of the "unearned increment."

5. Modern Phase (1876-1924). The centenary of the Declaration of Independence (1876) marked, appropriately enough, the passing of an old and the beginning of a new era in economic affairs as in political growth. Railroad construction attained transcontinental proportions; capitalism foreshadowed its modern

stride; the free land of the West was in sight of exhaustion; falling prices were accentuated by resumption of specie payments and demonetisation of silver; labour unrest culminated in the great strike of 1877. (Cf. Seligman, *op. cit.*)

The result was to direct attention to fundamental economic principles. In 1876, in reviewing the progress of economic science in the United States in the century elapsed, DUNBAR admitted (*North American Review*, January 1876): "The United States have, thus far, done nothing toward developing the theory of political economy, notwithstanding their vast and immediate interest in its practical applications"—a judgment in which Cliffe LESLIE four years later concurred (*Fortnightly Review*, October 1880) in declaring "American political economy is in the main an importation from Europe, not an original development; it has made but slight inductive study of surrounding phenomena, and follows, for the most part, the method of deduction from general assumptions; it has hardly attempted to investigate the laws of evolution of which the present economic structure and state of American society are the outcome."

The new spirit of inductive study of surrounding phenomena first showed itself in the work of Francis A. WALKER, Professor of Political Economy in the Sheffield Scientific School of Yale College, and Director of the Census of 1870 (later, also, that of 1880), and took the form of a brilliant restatement of the relation of labour and capital. The WAGE FUND theory had held sway in the United States as in England, with at best inarticulate and unavailing dissent, for the two generations following RICARDO. The reaction which had shown itself in England in Longe's indictment in 1866, in Cliffe Leslie's criticism in 1868, in THORNTON'S attack in 1869, and in MILL'S ponderous recantation in the same year, had exhausted itself in the United States in "patched and revamped versions." In a brilliant essay on "The Wage Fund Theory" (*North American Review*, January 1875) Walker finally disposed of this recrudescence, and a year later in *The Wages Question* (1876) differentiated, with convincing detail, the *entrepreneur* as an economic functionary from the capitalist, and analysed the composite profit of the prevailing theory of distribution into two elements, each subject to independent determination.

Walker's competence won further academic recognition by appointment in 1876 as the first lecturer on political economy in the new Johns Hopkins University. The substance of his course appeared in 1878 as a treatise on *Money*, and in briefer form in *Money in its Relation to Trade and Industry* (1889), prepared as Lowell Institute lectures. Recognised widely now as a virile and independent thinker, Walker, in his *Political Economy* (1883) and repeatedly thereafter, with a precision of language and an abundance of detail, presented a new theory of distribution in replacement of the one whose mainstay he had so completely destroyed (Hollander, "The Residual Claimant Theory of Distribution" in *Quarterly Journal of Economics*, February 1903).

More notable even than this reflex of doctrinal controversies among English economists, and the tonic influence of extraordinary changes in American organisation, was the return to the United States in the early 'eighties of a remarkable company of young scholars from post-graduate study in German universities. Their arrival and activity effected a virtual renascence in American economic study. The dominant characteristics of the group were an avowal of the historical-inductive method and an election, in the main, of concrete problems for inquiry. With others trained in this country lodgement was found in leading universities; student bodies gathered, and productive scholarship developed. (Cf. *Science Economic Discussion*, 1886.)

At Harvard, Taussig traced the growth and influence of American protectionism; at Yale, Hadley concerned himself with railway transportation, and Farnam with social problems; at Columbia, Seligman studied the theory and practice of taxation, and Mayo-Smith pursued statistical inquiries; at Johns Hopkins, Ely made pioneer studies of local taxation and of the labour movement; at Michigan, H. C. ADAMS became identified with fiscal studies; at Pennsylvania, Patten developed a theory of consumption, and James studied municipal economics; at Bryn Mawr, Giddings devoted himself to social philosophy; and at Smith and Amherst, Clark initiated brilliant speculations in economic theory.

The "historical movement" in the United States reached its high-water mark in the formation of the American Economic Association at Saratoga in 1885. A constitution was adopted with a "statement of principles" as follows: "(1) We regard the state as an agency whose positive assistance is one of the indispensable conditions of human progress. (2) We believe that political economy as a science is still in an early stage of its development. While we appreciate the work of former economists, we look not so much to speculation as to the historical and statistical study of actual conditions of economic life for the satisfactory accomplishment of that development. (3) We hold that the conflict of labour and capital has brought into prominence a vast number of social problems whose solution requires the united efforts, each in its own sphere, of the church, of the state, and of

science. (4) In the study of the industrial and commercial policy of governments we take no partisan attitude. We believe in a progressive development of economic conditions, which must be met by a corresponding development of legislative policy." To the foregoing was attached a footnote: "This statement was proposed and accepted as a general indication of the views and the purposes of those who founded the American Economic Association, but is not to be regarded as binding upon individual members."

In the organisation and early activity of the American Economic Association the extreme "historical" tendency in the United States spent itself. Stirred by militant challenge, heartened by clearness of issue, supplied with convenient channels of publication, the group of speculative thinkers to whom the work of ROSCHER, Cliffe Leslie, and INGRAM seemed emendatory rather than revolutionary, drew to the fore. The impulse took form in the founding of the *Quarterly Journal of Economics* in 1886, with Dunbar's fine inaugural on "The Reaction in Political Economy" sounding the keynote. The inevitable rebound developed. Included in the younger group were a quota—John B. Clark, Simon N. Patten, Franklin H. Giddings—inclined by habit of mind to deductive reasoning. Instinctively Francis A. Walker had been chosen as the first president of the American Association. Most of all, environment and contact begot tolerance and plasticity. MARSHALL'S *Economics of Industry* had appeared in 1879 and Walker's *Political Economy* in 1883, without appreciable effect. Now, however, Marshall's election to the chair of political economy, vacated by the death of FAWCETT, called attention to the novel elements in his doctrine; while Walker, aroused by SIDGWICK'S strictures, reiterated in incisive form the controverted elements of the "Wages Question." The publication of Marshall's *Principles of Economics* in 1890 marked the climax of the debate. With it, and the discussion immediately tributary, a lull was reached in economic controversy. (Cf. Hollander, "The Present State of the Theory of Distribution," in *Pub. Amer. Econ. Assoc.*, 1906.)

The economic scholarship of the next half-dozen years centred about the doctrinal contributions of Marshall and Walker. Not since Ricardo's time had such coherent theories of value and distribution been enunciated. The gap which the discrediting of the wage-fund theory had left was filled by attractive formulae, and recognition of the *entrepreneur* function and its reward interpreted the striking features of the new industrialism. But the respite was brief. The same year, 1890, in which Marshall's *Principles* was issued, the English translation of BÖHM-BAWERK'S *Capital and Interest* saw light—heralded indeed a year before by Bonar's admirable critique of the AUSTRIAN SCHOOL (*Quarterly Journal of Economics*, October 1888). In quick succession followed Böhm-Bawerk's *Positive Theory of Capital* and Wieser's *Natural Value* in English translation, with Smart's handy *Introduction* as a résumé. An outburst of controversial activity ensued, unparalleled in the history of American economic writing. During the 'nineties this sustained contest — exhibiting every variety of intellectual effort from stimulating analysis to hypercritical dialectic—raged about the Austrian doctrines. Through sheer exhaustion of disputants—and witnesses—the struggle had abated, when in 1899 Clark's *Distribution of Wealth* summarised with rare amenity of form the speculations of a profound philosopher and an inspiring teacher. The effects were wide conversion and ardent discipleship. For a decade Clark's doctrines dominated economic philosophy in the United States, weakening only with growing uneasiness as to the prematurity of speculative inquiries and with increasing resort to realistic studies. Walker, Böhm-Bawerk, Clark, thus constitute the major episodes in the thirty years of American economic speculation. There were minor doctrinal incidents—the debate over the scope and method of sociology in 1895-98, the discussion as to the order and form of economic instruction in 1912; but these stand in immediate relation to local and temporary events.

During this period positive inquiry was by no means absent. Governmental problems, national, state, and local, were taking on an increasing economic complexion with direct reflex upon student interest. Historical, institutional, and local investigations were carried on in graduate schools with energy. Doctoral dissertations extended over a widening range. Channels of publication multiplied and scientific assemblies became regular. Economic speculation, nevertheless, continued the prime interest and activity of American economists,

The familiar symptoms of scientific arrest had begun to show themselves in the first years of the century: the encouragement of commentation, the vogue of text-book writing, and the tolerance of metaphysical controversy as to final terms and ultimate concepts. Economic speculation, pursuing a dominantly deductive method, had come to be marred by the omission of verification, and more and more had partaken of the character of economic theorising (*cf.* Hollander, "Economic Theorising and Scientific Progress," in *American Economic Review*, March 1916, Supplement). Depression as to the state and tendency of the science was succeeded by conviction that political economy as pursued in the United States had been infected by unsound method,

that the productivity of scientific labour had been thereby impaired, and that a further diversion of energy into barren areas was threatened.

This consciousness found expression in a greater application to positive inquiry at the expense of speculative reasoning. At Johns Hopkins and elsewhere economic investigation deliberately took the form of the collection and analysis of actual economic data instead of the formulation of an abstract philosophy. Influenced by the methods of BOOTH, Webb, and Rowntree, came practical recognition—at first slight but rapidly increasing — that "research funds" are as essential to scientific activity in political economy as laboratory apparatus is to chemistry and clinical provision to medicine. (Cf. Hollander, "Economic Investigation in the United States," *Yale Review*, May 1903.)

As a generation before, startling changes in the nation's economic life took on compelling interest. With the greater specialisation of social effort, nation, state and city began to utilise the economist's counsel and to enlist his personnel to a new extent. This increasing requisition by public service, accompanied by sensational bidding up by private enterprise, had by 1914 so far dissipated the old seclusion that prospective scientific impoverishment rather than present public neglect constituted the economist's concern. In national affairs this had become physically manifest. The permanent Census Office, the reconstituted Department of Labour, the newly established Tariff Commission, the enlarged Department of Commerce, the reorganised Federal Trade Commission, the expanding Department of Agriculture, were so many stages in the economist's progress. Not always as expertly staffed as might be, hampered by political exigency, they reflected a widening infiltration. There were positive triumphs too. Workmen's compensation had become a part of our industrial scheme. Mediation and arbitration were finding use in a systematised form. Collective bargaining, at least as a phrase, had entered into business terminology. The income tax had been incorporated into the national revenue system. The theory of monopoly price was definitely accepted as to the regulation of non-competitive industry. The Federal Reserve Act had repaired the glaring defects in our banking organisation. The Federal Farm Loan project gave assurance that agricultural credit was to become available.

The entry into and part of the United States in the World War accentuated these tendencies. Problems of industrial mobilisation, of labour adjustment, of price-fixing, of revenue provision, of banking administration, emphasised the inadequacy of current economic information and the need of expert economic guidance. Even though at the outset there was no instinctive recourse to the economist on the part of public authority, and insufficient requisition of his equipment thereafter, yet services of importance and usefulness were rendered by almost every American economist.

In the post-Armistice period the American economist has become again alert scholar and diligent investigator, concerned primarily with positive inquiry but retaining keen interest in speculative studies (*cf. The Trend of Economics*, ed. Tugwell, 1924). The future of the science in the United States is thus full of promise. Compactly organised in scientific association, supplied as to assembled material and equipped as to technical journals, animated with high sense of public responsibility, established in academic office with large student groups affording apprentices and offering discipleship —the American economist has attained an honoured rank among scientists and come to fill a definite place in the nation's life. (Cf. Hollander, "The Economist's Spiral," in *American Economic Review*, March 1922.)

[Dunbar, Wetzel, Neill, Hurst, Jenks, Walker, Ely, Seligman, Taussig, Hollander, *supra*; Furber, *Geschichte und kritische Studien zur Entwickelung der ökonomischen Theorien in Amerika*, 1891; Sherwood, *The American School of Political Economy*, 1897; Seligman, "Economists," in *Cambridge History of American Literature*, 1921 (vol. iv.); Turner, *The Ricardian Rent Theory in Early American Economists*, 1921.]

J. H. H.

APPROPRIATION (Public Finance). The word appropriation is used in various senses in public finance. In the United States it signifies the amount granted by Congress for the service of a public department, and is employed by anticipation to designate what we call estimates. In this country the financial affairs of the session of Parliament are concluded by an Appropriation Act which allots to each department the sums voted for its use in Supply. The Appropriation Account, presented to Parliament by the Comptroller and Auditor-General, shows how the amounts so appropriated have been spent in each case, and comments upon any considerable divergence from the estimate. An Appropriation-in-aid is a sum received by a department (for example, fees, receipts from sales of stores, etc.) and not paid into the Exchequer, but used to reduce the amount of money which Parliament is asked to provide. If such receipts are likely to exceed the total expenses of the department, a nominal or token vote for say £10 or £100 is presented to the House of Commons in order that the department may not escape Parliamentary criticism and control. H. H.

ARBITRATION, INTERNATIONAL. One of the earliest methods for the settlement of disputes between individuals within an organised

society has been the voluntary submission of the parties to an arbitrator. This method has been adopted by civilised states ever since the IVth millennium B.C. when the kings of Lagash and Umma appointed the neighbouring king of Kish to act as arbitrator in the delimitation of the boundaries between their cities. After the break-up of the Roman Empire, the Catholic Church became the guardian of the public peace, and the Pope the arbitrator in the political disputes submitted to him by the princes of the new principalities, which were growing out of the Nordic tribal organisations. With the Reformation the Pope as arbitrator became impossible. Diplomacy took his place in the international relations of the modern states, and with their rise the modern law of nations came into existence. The agreements of diplomats based upon the principles of international law were embodied in treaties. The Treaty of Westphalia, 1648, recognised the new order. By this treaty the equality of states was recognised by the Christian Powers. A few years later the Cromwellian treaties of 1652, 1654, 1655, and 1656 provided for the appointment of arbitrators to adjust certain differences between the respective parties. This method was revived by the Jay Treaty of 1794 between Great Britain and the United States, and proved so successful in settling the disputes between the two countries as to convince the world of the advantages of arbitration. During the nineteenth century nearly two hundred instances are recorded of the submission of international disputes for settlement by arbitration, either to mixed commissions or to single arbitrators. In the majority of the earlier instances the disputes were not of a dangerous character. It was the Treaty of Washington of 1871, with the resulting *Alabama* Arbitration, which gave an immense impetus to the settlement of first-class disputes by voluntary arbitration. Thenceforth disputes of a grave character were referred to arbitration. Successful as this method proved, it was not, however, wholly free from defects. The *Alabama* case illustrates one peculiar weakness of this method. It was found necessary to settle beforehand in the Treaty of Washington what should be the law to be applied. The Three Rules of Washington were in fact *ex post facto* legislation. Great Britain was constrained to accept as law not what in fact it was at the time of the acts complained of, but what the American Government thought the law ought to have been. And generally, the creation of a special tribunal for each particular case, the selection of arbitrators or arbitrator, the agreement upon the procedure to be followed and the law to be applied, caused delay, embarrassment, and all sorts of difficulties. These defects the first Hague Peace Conference of 1899 sought to remove. By the Convention for the "Pacific Settlement of International Disputes" two methods of settlement were adopted, mediation and arbitration. To facilitate the latter—first, in differences not involving honour or vital interests, international commissions of inquiry may be constituted by special agreement between the parties; secondly, any dispute may be referred by agreement to the Permanent Court of Arbitration established by the Convention. As Art. 15 declares, "International Arbitration has for its object the settlement of differences between States by judges of their own choice and on the basis of respect for law." This Convention was ratified or adhered to by forty-four states. To ensure the better working in practice of the commissions of inquiry and tribunals of arbitration, and to facilitate recourse to arbitration in cases which permit a summary procedure, the Convention was revised by the second Hague Peace Conference of 1907. This was ratified or adhered to by only twenty-seven states. Consequently, certain states remain bound by the Convention of 1899. Each state appoints four persons of known competency in international law, who form the panel from which the arbitrators are selected. Failing agreement between the parties on the composition of the Court, each party appoints two arbitrators and these together choose an umpire. If they cannot agree, the choice of the umpire is entrusted to a third Power, selected by the parties. Failing such agreement, each party selects a different Power and the choice of umpire is decided by them. If this fails, by the Convention of 1907 the two Powers present two members from the panel from whom the umpire is selected by lot. The latter Convention also provides that one only of the two arbitrators selected by a party may be its national. The procedure adopted was that drafted by the Institute of International Law, but the parties, if they so desire, may adopt any procedure they please. Further, if the parties submit to arbitration they sign "a special act-*compromis*—in which the subject of the difference is clearly defined, as well as the extent of the arbitrators' powers." If the parties, however, so agree, the *compromis* may be settled by the Court. By the Convention of 1907, "generally speaking all the conditions on which the parties are agreed" may be defined in the *compromis*. The award is the opinion of all or of the majority of the arbitrators, and is accompanied by a statement of reasons. The agreement to arbitrate implies an agreement to abide by and to execute the provisions of the award. The award is final and without appeal, unless the parties have reserved the right to a revision. Critics of the Court have not been wanting. It has been said that it "is not permanent, because it is not composed of permanent judges; it is not accessible, because it has to be formed for each

individual case; finally, it is not a Court, because it is not composed of judges." And it might be added it possesses no compulsory jurisdiction, the parties settle the issues to be determined, and sometimes the procedure to be followed and the law to be applied. If, indeed, all these objections were met it would cease to be an arbitral tribunal and would become a court of justice. The main object, as one of its authors said, was "not to render justice but to settle and put an end to the dispute." In spite of the alleged imperfections, the Court has proved of inestimable service in the settlement of certain classes of disputes. Since its creation it has determined some eighteen cases, many of first-class importance. Although the awards may have failed to give complete satisfaction, they have been loyally accepted, and disputes which might have given rise to armed conflict amicably settled. An attempt to confer compulsory jurisdiction on the Court failed. But a large number of treaties have been concluded in which the parties have agreed to refer all disputes arising between them, or specified classes of subjects, or specified subjects, to arbitration, and generally to that of the Hague Tribunal. Questions affecting "vital interests," "independence," "national honour" are usually excluded. Since 1903 such treaties have been concluded by over forty Powers. In such treaties a certain element of compulsion is involved. In 1914, prior to the outbreak of war, the United States concluded nineteen treaties providing that *all disputes of every nature whatsoever* be referred to a Permanent International Commission composed of five members appointed by the parties as therein provided. The parties agree not to declare war or commence hostilities during the Commission's inquiry and before its report is issued.

[Scott, *The Hague Conventions and Declarations of 1899 and 1907.*—Scott, *The Hague Court Reports.*—Pollock, *The League of Nations*, 2nd ed.—Pitt Cobbett, *Leading Cases on International Law*, 4th ed. by Bellot.] H. H. L. B.

ARISTOTLE.* When we speak of the financial ideas of Aristotle we have chiefly in mind the second book of his *Economics*—one of the few financial works bequeathed to us by antiquity. During the last twenty years this book has been the subject of numerous writings. Unhappily the second and much the longer of the two chapters which compose it has nothing scientific about it. It is a collection of financial expedients strictly comparable with the Military Stratagems of Polyen. The author, whoever he is, probably a later peripatician, has simply collected some amusing and picturesque financial devices. None of them relate to the golden age of Greece (5th century), nor to her well-organised cities, nor to the great financiers of antiquity like the orator Lycurgus. All we learn from the forty anecdotes which make up the collection is that in the absence of public credit every great financial emergency condemned the Greek States (which, unlike Athens in the 5th century, had not a well-supplied public treasury) to expedients which were often disguised confiscation.

The first chapter, on the contrary, is imbued with the purest scientific character. Recognising that financial systems vary with the form of government, it distinguishes between Royal Economy, Satrapic Economy, and Political Economy (that of the free cities). The great king lived above all on tribute. The Satraps depended upon taxes (including tithe and direct taxes on men, animals, and business). The Greek cities, objecting to direct taxes as contrary to liberty, relied upon consumption taxes and other petty imposts (ἐγκύκλια). It is possible that this first chapter is a summary of some lecture by Aristotle, especially as we find again in the *Rhetoric to Alexander* (xxxiv.) the idea, shared later by Bodin and the German Cameralists, that the public domain is the chief and best source of public revenue.

If we wish for a more complete knowledge of Aristotle's views on finance, we must look elsewhere, and especially in his *Politics*. In Book E′ of this work we find a detailed picture of tyrannic economy. Tyranny was a regular form of government, and Aristotle shows clearly why more than any other government it needed money, why its end and aim was wealth (τέλος τῆς τυραννίας ὁ πλοῦτος). He shows the great expense of tyrants: body-guards, continual wars, sumptuous courts, public works, and how the tyrants like the Satraps had recourse to direct taxes and confiscations. Plato, Xenophon, and Book II. of the *Economics* complete and confirm this picture.

In Book G′ of his *Politics* Aristotle expounds his ideas on Social Finance, which found a place in the 4th century in the free cities as it does to-day in parliamentary countries. He condemns the policy of crushing the rich with taxes, "liturgies," and confiscations in order to meet expenditure for the benefit of the poorer classes. He holds that largess to the poor ruins finance without utility, and compares those who wish to succour the poor by this method to those who try to fill a pail which leaks badly. The community as a whole, and not particular classes, must be kept in view; useless expenses, brilliant and costly fêtes, must be avoided; commerce and industry must be encouraged; efforts must be made to render prosperity permanent—almost Gladstonian doctrine.

Aristotle's interest in finance is also shown in the precision of the information contained in his *Athenian Republic*. Since the discovery of this work we know that it was Pisistratus

who introduced the tithe into Athens, we know the number of Athenians (20,000) who were salaried during the Peloponnesian War, that it was after this war that the salaries and doles were further generalised, that the *θεωρικόν* was not introduced by Pericles and survived the reforms of Demosthenes. Prior to 1890 all these points were controversial.

[Ulrich Wilcken, *Zur pseudo-aristotelischen Öconomica*, Hermes, xxxvi., 1901, 187-200.—Kurt Riezler, *Über Finanzen und Monopol im alten Griechenland*, Berlin, 1907.—P. Schneider, *Das zweite Buch der pseudo-aristotelischen Ökonomika*, Wurzburg, 1907.—Rostowzow, *Studien zur Geschichte d. röm. Kolonats*, Leipzig, 1910.—A. Andréadès, *The Financial Theories of Aristotle and his School* (in Greek), Athens, 1915.—W. L. Newman's edition of the *Politics*, 4 vols., Oxford, 1887-1902.—Sir John Sandys' edition of the *Republic*, Cambridge, 1912.] A. A.

ATKINSON, Edward (1827-1905), was born at Brookline, Massachusetts. He pursued a business career and in 1877 became president of the Boston Manufacturers' Mutual Fire Insurance Company. In his writings he dealt chiefly with the controversial questions which attracted public attention. Thus he opposed the policy of Protection, which was popular with most of the manufacturers of the New England States. In 1887 he was commissioned to make a report on the position of Bimetallism in Europe, and published in the same year a volume on the subject. Towards the close of the century he attacked the Government of the United States on the ground of Imperialism, and produced in 1899 the magazine *Anti-Imperialist*. He invented an apparatus for saving labour and fuel in cooking, and published in connection with it a volume entitled *The Science of Nutrition*.

His chief writings are: *Cheap Cotton by Free Labor* (Boston, 1861); *The Collection of Revenue* (1866); *Argument for the Conditional Reform of the Legal Tender Act* (1874); *Our National Domain* (1879); *Labor and Capital, Allies not Enemies* (New York, 1880); *The Fire Engineer, the Architect and the Underwriter* (Boston, 1880); *The Railroads of the United States* (1880); *Cotton Manufacturers of the United States* (1880); *The Distribution of Products* (New York, 1885); *Bimetallism in Europe* (1887); *The Industrial Progress of the Nation* (1890); *The Margin of Profits* (1887); *Taxation and Work* (1892); *The Science of Nutrition* (1896); *Consumption Limited, Production Unlimited* (1889); *The True Policy of Protection* (1904): *Facts and Figures as the Basis of Economic Science* (1904). E. L. H.

AUSPITZ, Rudolph (1837-1906) was educated at Vienna and went subsequently to Berlin and Paris, where he studied physics and higher mathematics. On returning to Austria he entered into business and became a sugar manufacturer. From 1871 to 1900 he was a member of the Landtag of Moravia, and for the greater part of this time he was also a member of the Reichsrat. He was one of the most prominent men in the Liberal Party, and was partly responsible for the existing methods of sugar taxation and for the reform of direct taxation brought about in 1896. He opposed protectionism and indirect taxation, and favoured a system of progressive taxation. Although a sugar manufacturer, be refused to join the cartel which was formed for the purpose of regulating the price of sugar. He devoted himself also to the study of economic theory and collaborated with Richard Lieben in producing an important mathematical treatise on prices entitled *Untersuchungen über die Theorie des Preises*. In this book the modern theory of value, as expounded by the Austrian economists, was adopted. The work of Auspitz lay, however, chiefly in the practical sphere, in which he showed himself free from bias and class prejudice. E. L. H.

THE AUSTRIAN SCHOOL OF ECONOMISTS.* Carl Menger founded the Austrian School by the publication in 1871 of his *Grundsätze der Volkswirtschaftslehre* (Principles of Economics). Like the Historical School in Germany, he attacked the theory of the classical economists. He did not, however, go as far as the Germans in abjuring all theory, but tried to replace it by a new exact theory. He took the subjective theory of Value as his basis. In so doing, he hit upon the same leading idea as his contemporaries, Jevons and Walras, and his German precursor Gossen. Independently of one another, these four thinkers have laid the foundation of the new theory of value, though they differ in some particulars. Menger departed the farthest from the classical tradition. The system built up by himself and his followers is not a mere amendment of the classical system; it is really a new construction in spite of the many important ideas derived from the older system. The Classical Economists were individualists. They regarded individual interest as the motive force of economics, but none the less began to investigate national economics without troubling themselves about the economics of the private individual. They held in particular that they had only to deal with value in exchange, and they left out of account the subjective value in use to the individual. This mistake entails many others, for in national economics, value in exchange depends on the (subjective) value in use and cannot be understood apart from it; and since every economic process is measured in terms of value, as a further consequence the working of the whole economic structure cannot be understood clearly apart from it. It is Menger's great merit that he went back to the individual roots of economic facts. He himself always remained an

individualist in the sense of the classical economists. His successors ceased to be so; Wieser, especially, teaches that in national economy individuals are subject to social forces.

In another important point the Austrian School departed from the classical tradition. The classical economists had only penetrated as far into the economic structure as they thought necessary to find a basis for freedom, which was the postulate of their time. On the other hand, the Austrian School since the time of Wieser has set itself the task of finding the theoretical bases for understanding the present day, which requires protection and limitation of freedom and wants to be equally clear as to the relation of the state to national economy and that of national economy to the world economy.

Menger starts by distinguishing between free and economic goods. The former are present in excess, the assured supply exceeds the demand, while in the case of the latter, the supply is less than or equal to the demand. Only economic goods call for the exercise of forethought; they must be used with care and protected against damage; they alone are produced and exchanged; they only become property, and finally, they only can be valued. Economic value according to Menger's definition is "the importance which concrete goods, or quantities of goods, receive for us from the fact that we are conscious of being dependent on our disposal over them for the satisfaction of our wants." According to Menger, value is measured by that satisfaction which is the latest and least of the units of satisfaction required to produce the maximum total satisfaction. Wieser calls this "marginal utility" (*Grenznutzen*), Jevons "the final degree of utility." Marginal utility is based on the law of satiation of want, which states that the degree of desire for the same amount of goods diminishes with continuous satiation. In this all-important law Menger and his followers of the Austrian School agreed with Gossen, Jevons, and Walras. For details we refer the reader to the articles on the Final Degree of Utility in Vol. II.

The law of marginal utility applies not only to economic goods, but, as soon as an economic society reaches a certain stage of development, to labour also. In the primitive undeveloped stage, labour is free, the available quantity of it exceeds the demand; of course only quite unskilled labour is available. It is only in a fully developed economic society that labour, which becomes continually more skilled and specialised, enters into the economic scale of quantities. Even free labour must be dealt in and valued, because it entails, as Adam Smith says, a sacrifice of rest, freedom, and happiness. This is the basis of the theory which derives the value of the product from the trouble and risk involved in the work. Adam Smith took this as his starting-point but did not keep to it. Ricardo tried to work it out to the end, and the socialists took it over from him. The theory of labour ceases to hold good in a fully developed economic society. As soon as the quantity of labour available does not meet the demand, labour, like economic goods, is valued according to its marginal utility.

In the case of consumption goods which serve directly to satisfy wants and do not require to be produced or obtained by exchange, the marginal utility can be derived from the scale of utilities they provide. As soon, however, as production or exchange comes into play, as happens with the great majority of commodities at the present day, the marginal utility must be derived in many cases not from the utility of the thing itself, but from the remoter utilities of other goods and labour. This obscures the law of marginal utility. It is the difficult task of the theorist to make it clear. Menger did this for production goods and labour. He shows that the whole world of goods, together with the labour done upon them, falls into orders. The first or lowest order or, as Böhm-Bawerk says, proximate order, consists of consumption goods which satisfy needs immediately, *e.g.* bread. Commodities of the second order are those from which goods of the first order are made directly, *e.g.* flour. The work of the baker also, and all appliances and utensils connected with it, fall into the second order. The third order consists of those elements which produce the goods of the second order and so forth. Goods of the highest order are those which cannot, like the others, be prepared from others, *e.g.* fertile land. Labour is always in the highest order; it cannot be produced. Goods and labour of the higher and highest orders derive their value and marginal utility from that of the goods of the first order, whose production is dependent on them. When valuing the higher orders we are faced with the difficult problem of distributing the result among the different contributing factors. Menger calls all the factors co-operating in the product complementary, for each only plays its part in conjunction with others. The physical division of the joint product is impossible. We cannot determine what part of the fruit is due to the soil, what to the labour, the seeds or the implements used. Menger employs another method. He shows that the complementary factors in the production can be used in variable proportions; the earth can be worked without manure and yet not become barren. In each case it is only a part of the product that is dependent on the individual factor, and Menger determines its value in accordance with this part. Wieser and Böhm-Bawerk have proposed other formulæ. The school is not at one on this point. It is, however, at one in holding, as Wieser says, that the problem is a question

of practical imputation (*Zurechnung*). Just as judicial imputation punishes the responsible originator, so economic imputation attempts to determine the causes which are practically effective in obtaining the return. Wieser distinguishes between specific and general imputation. Specific imputation applies to the elements peculiar to a given type of production, *e.g.* the mining area. General imputation applies to the widely distributed elements, such as ordinary labour, coal or iron: the "cost elements." These elements are valued according to the smallest utility for the creation of which they may be used in any type of production; the specific elements are valued by deducting the value of the costs from the total product. Accordingly, forest land is valued low where woods abound, but a vineyard yielding a special vintage is valued highly.

Wieser has shown that the law of costs is only a special case of the marginal law. He distinguishes specific products for which specific elements are necessary and cost products for which only cost elements are used. The cost products are valued in accordance with the marginal utility of the cost elements which the latter continue to yield in any product. Specific products are valued in accordance with their own marginal utility.

Further shiftings of the marginal utility are brought about by exchange. In barter each party to the bargain parts with an article which has a less personal value in use in order to obtain a greater value in return. From this law of exchange Menger has derived the law of prices for barter in the simple types of competition and monopoly. Böhm-Bawerk, who greatly advanced the theory of value by his clear exposition and vigour in controversy, has rendered the special service of working out the theory of prices in the case of barter. Wieser formulated the law of prices for monetary transactions and applied it to modern forms of monopoly and the allied "monopoloid" formations (Dumping, Cartel, Trusts, etc.).

The price of a commodity is determined by the monetary equivalent which the marginal buyers offer for it. The marginal buyers are the buyers with the least need and the least purchasing power, who yet must buy, if all the goods on offer are to be sold. Prices are "stratified," because they are determined in the case of mass commodities by the low purchasing power of the lowest classes, in the case of luxury articles according to the purchasing power of the very rich, and for the intermediate classes according to the purchasing power of persons of moderate means. The rich buyer who buys an object of mass consumption obtains the advantage of the consumer's rent. For prices, too, the law of costs and the law of imputation hold good.

Menger recognises only subjective value, but Wieser objective value as well. Subjective value in use or subjective value in exchange is what an object is worth to the individual—its value in the economy of the private person. The objective value in exchange is what it is worth in the national economic process, its value in the national economic sense. Any one engaged in industry or trade must reckon in terms of objective exchange value.

Menger has given particular care to working out the bases of the theory of money and to establishing its origin. Wieser worked out the theory of money still further, adhering strictly to the law of marginal utility. Menger remained a metallist, but Wieser keeps a position between metallism and nominalism. He derives the exchange value of money in the first place from its value as material, but seeks to prove that the exchange value once established continues to alter of itself with historical continuity. He attacks the Quantity Theory which commits the error of transferring the law of value of the commodity to money without taking into account what is peculiar in the services money performs. The value of money stands in the closest connection with this service; in accordance with the relations of this service the value of money gives a comprehensive expression of the movements of the marginal utility of goods measured in relation to the service of money. The gradual extension of the use of money and the system of public taxation has largely contributed to the historical increase in the value of money.

Menger did not treat the theory of income, he gives only a short exposition of interest on capital. Böhm-Bawerk has dealt with capital and interest in the greatest detail; his history of the doctrine is a masterpiece of fruitful criticism. In his exposition of interest the underlying idea is chiefly that future needs are of less account in proportion to the remoteness of the time when they arrive. Wieser, who conceives also the idea of capital rather differently from Böhm-Bawerk, explains interest with a theory of productivity, on which point Böhm-Bawerk disagrees with him.

Wieser moreover develops a complete theory of income. Its most important principles are as follows.

All money income is derived through the medium of prices which follow the law of marginal utility, and therefore money income itself is subject to this law. Since productive land is a specific commodity, rent is derived by specific imputation. Ricardo's theory of agricultural rent holds good empirically, but its theoretical expression could not be completely successful, because Ricardo did not know the law of marginal utility. Urban rent is also based upon specific imputation, except that here it is not the difference of the costs of construction, but the difference of the premium which is paid for

the better sites. Interest on capital is partly productive and partly consumptive interest. The former is settled by the share of the product which is to be imputed to capital for the part it takes in production; the latter is based on the higher estimation of his present needs, which is peculiar to the debtor who is in difficulties or who is careless about money. The entrepreneur's income is the specific income of the person who directs the business, who receives the whole of the gross profit and defrays the costs. Wages rest on general imputation and are lowest among the largest classes, because their marginal product is the lowest.

Wieser also examines the relations of State and world economics. The State in its private business must take exchange value into account; in its public administration, however, it must in the first place consider the different needs, even if these needs are not supported by adequate purchasing power. While market prices are stratified in accordance with purchasing power, and goods are distributed accordingly, state services should be distributed according to need, and taxes should be assessed with a progressive burden on the higher incomes. Free interchange of men, capital, goods, and ideas between the different nations is prevented by barriers due to historical circumstances. Prices and income therefore are not so completely brought to a level as within the nation, the development of production is not uniform, trade centres are not always placed or stocked in accordance with the natural advantages of the situation. Every developed system of national economy is a unity, but world economy has not as yet become one. If it were, free trade would be advisable, as it is within the nation. As long as it is not a unity, protective tariffs are justified.

Menger's exact method was violently attacked by the German historical school, whom Menger himself opposed with no less violence. To-day the difference has been bridged. According to Wieser, the theory, in order to isolate and idealise, starts with assumptions of the widest possible application in order to lead through a system of steadily decreasing abstractness down to the concrete reality, where the work of the historical and realistic method begins. The theory builds up from the common experience found in the consciousness of every individual who has grown up in an economic environment; the historical realistic method, on the other hand, must use sources only accessible to scientific research.

A succession of younger men in Austria have accepted the teaching of the founders of the school. Many of these younger investigators oppose the subjective starting-point of the doctrine. They fear the objection that the psychological basis endangers the certainty of the result. The founders of the school, however, never employ principles taken from scientific psychology. The law of satiation of wants, which is chiefly in question, they have taken from general economic experience, and the development of their doctrine is purely empirical.

The Austrian school has had an influence extending outside Austria, but Germany was the last to be affected by it and hitherto the least. The bibliography appended gives the most important foreign authors who have adhered to the main tenets of the school, but it leaves out those who have only drawn upon it for an idea or so.

The most important works of the founders of the Austrian school are the following:

Carl Menger, *Grundsätze der Volkswirtschaftslehre*, Vienna, 1871; Posthumous 2nd edition, Vienna, 1923; *Methode der Sozialwissenschaften*, Leipzig, 1883.—Friedrich von Wieser, *Ursprung und Hauptgesetze des wirtschaftlichen Wertes*, Vienna, 1884; *Der natürliche Wert*, Vienna, 1889; *Natural Value*, edited with preface and analysis by William Smart. Translated by C. A. Malloch, 1893; and *Theorie der gesellschaftlichen Wirtschaft* in section i. of the *Grundriss der Sozialökonomik*, Tübingen, 1914. Here Wieser, starting from the principles laid down by the Austrian school, tries to construct a comprehensive theoretical system of social economics.—Eugen von Böhm-Bawerk, *Kapital und Kapitalzins*, vol. i.; *Geschichte und Kritik der Kapitalzinstheorie*, Innsbruck, 1884; 4th edition, Jena, 1921; *Capital and Interest*; a critical study of economical theory. Translated with preface and analysis by W. Smart, 1890; Vol. ii., *Positive Theorie des Kapitals*, Innsbruck, 1889; 4th edition, Jena, 1921; *Positive Theory of Capital*. Translated with preface and analysis by William Smart, 1891. This remarkable work, translated into many languages, has largely helped in gaining an international reputation for the Austrian School. The second volume contains, besides the positive theory of capital and interest, an illuminating development of the theory of value and prices.

[Cf. the articles on Carl Menger and Böhm-Bawerk. Also Wesley C. Mitchell, "Wieser's Theory of Social Economics" in the *Political Science Quarterly*, vol. xxxii. No. 1. See also James Bonar, "The Austrian Economists," in the *Quarterly Journal of Economics*, iii., Boston, 1888.]

Among the authors who carried on the teaching of the Austrian School the following are to be specially noted.—Emil Sax, *Grundlegung der theoretischen Staatswirtschaft*, Vienna, 1887; *Die Verkehrsmittel in Volks- und Staatswirtschaft*, 3 vols. 1918-22.—Robert Meyer, *Principien der gerechten Besteuerung*, Vienna, 1884; *Wesen des Einkommens*, Berlin, 1887. Both authors have the merit of having applied the theory of marginal utility to the theory of taxation.—Eugen von Philippovich adopted the theory of marginal utility (without, however, developing it further) in his much-read textbook, *Grundriss der politischen Ökonomie*, i., 15th ed., Tübingen, 1920.—Josef

Schumpeter, *Wesen und Hauptinhalt der theoretischen Nationalökonomie*, Vienna, 1908, brings the Austrian doctrine into connection with that of Léon Walras. His second large work: *Theorie der wirtschaftlichen Entwicklung*, Leipzig, 1912, no longer follows the same line. His *Epochen der Dogmen- und Methodengeschichte* (Part 1 of the *Grundriss der Sozialökonomik*, Tübingen, 1914) is a short but profound study of the development of the theoretical schools of political economy before the Austrian School.—H. Oswalt, *Vorträge über wirtschaftliche Grundbegriffe*, 4th ed. 1922, gives a particularly clear account of the doctrines of the Austrian School.—Emil Lederer, *Grundzüge der ökonomischen Theorie*, Tübingen, 1922, tries to bring the Austrian teaching into line with Marxist theory. Besides these writers the following should be mentioned.—Viktor Mataja, *Der Unternehmergewinn*, Vienna, 1884.—Richard Schüller, *Die klassische Nationalökonomie und ihre Gegner*, Vienna, 1885; *Schutzzoll und Freihandel*, Vienna, 1905.—Robert Zuckerkandl, *Theorie des Preises*, Leipzig, 1889. The article *Preis* in *Handwörterbuch der Staatswissenschaften*, 4th ed., Jena, 1924.—Georg Sulzer, *Die wirtschaftlichen Grundgesetze*, Zürich, 1895.—Leo Petritsch, *Die Theorie von der sogenannten günstigen und ungünstigen Handelsbilanz*, Gratz, 1902: *Zur Lehre von der Überwälzung der Steuern*, Gratz, 1903.—K. Soda, *Geld und Wert*, 1909.—Ludwig Mises, *Theorie des Geldes und der Umlaufsmittel*, Munich, 1912.—Ernst Broda, *Die Lösungen des Zurechnungsproblemes* in *Zeitschrift für Volkswirtschaft*, Vienna, vol. xx.—Hans Mayer, *Untersuchung zu dem Grundgesetz der wirtschaftlichen Wertrechnung*, ditto, new series, vols i. and ii.—Franz X. Weiss, *Produktionsumwege und Kapitalzins*, ditto, new series, vol. i.—Leo Schönfeld, *Nutzen und Wirtschaftsrechnung*, ditto, vol. iii.—L. Stephinger, *Wert und Geld*, 1918.—Oscar Engländer, *Bestimmungsgründe des Preises*, 1921.—Carl Landauer, *Grundprobleme der funktionellen Verteilung des wirtschaftlichen Wertes*, 1923. Of non-German authors closely connected with the Austrian School the following should be mentioned.—N. G. Pierson, *Leerboek der Staatshuishoudkunde*, Haarlem, 1890. *Principles of Economics*. Translated from the Dutch by A. A. Wotzel, 2 vols. 1902, 1912.—Maffeo Pantaleoni, *Principii di economia pura*, 2nd ed. 1894; *Pure Economics*. Translated by G. Boston Bruce, 1898.—Simon N. Patten, *Theory of Dynamic Economics*, Philadelphia, 1892.—Herbert J. Davenport, *Value and Distribution*, Chicago, 1908.—V. M. Urban, *Valuation: its Nature, its Laws*, 1909.—Albert Aftalion, *Les trois notions de la productivité* in *Revue d'Économie politique*, 1911.—Frank A. Fetter, *The Principles of Economics*, New York, 1911.—G. Bagge, *Arbetslönensreglering genom sammanslutninger*, Stockholm, 1917.—Wolfgang Heller, *Kozgazdasagtan*, Budapest, 1919.—Erik Lindahl, *Die Gerechtigkeit der Besteuerung*, Lund, Berlin, 1919.—Knut Wicksell, *Vorlesungen über theor. Nationalökonomie*, vol. i. 1913, vol. ii. 1922.—L. V. Birck, *The Theory of Marginal Value*, London, 1922.—C. A. Verrijn Stuart, *De Grondslagen der Volkshuishouding*, 1920. F. W.

AVERAGE, UNWEIGHTED. See AVERAGE, WEIGHTED.

AVERAGE, WEIGHTED (in Statistics). When we seek to take an average of a number of figures, it is frequently the case that the importance attached to the different figures ought not to be the same throughout, but that some of them ought to be *weighted* relatively to others. Suppose, for example, that in a given market the price of corn on one day is thirty-two shillings, and on the following day thirty-six shillings a quarter, but that the amount of corn bought and sold on the first day is three times as much as on the second. Then, if we consider simply the prices, the average for the two days will be thirty-four shillings; while, if we also take into account the amount sold, the average will be thirty-three shillings. The former is the *unweighted average*, the latter the *weighted average*; and the latter will for most purposes have the greater utility. An important case in which a weighted average is desirable is in the construction of an index-number for measuring changes in the purchasing power of money. It is clear that, if we wish to measure the value of money for the average consumer, a commodity which is in general consumption in large quantities should have greater weight attached to it than one which is consumed by certain classes of the community only, and by them perhaps in small quantities.

[See INDEX NUMBERS, and cf. Bowley, *Elements of Statistics*, pp. 111-118.]

AVERAGES.* The doctrine of average, being fundamental in Statistics and Probabilities, is discussed in all general treatises on these sciences, of which many have appeared since the preceding article was written. Above the crowd of text-books may be distinguished Bowley's *Elements of Statistics* (4th ed. 1920), and Yule's *Introduction to the Theory of Statistics* (5th ed. 1919). Many new aspects of the subject are presented in the stupendous series of contributions to the Mathematical Theory of Evolution by Professor Karl Pearson, published in the *Transactions* of the Royal Society. *Biometrika*, edited and in great part written by him, is also a rich mine of original theory. Averages, with a kindred topic the Law of Error, occupy the Second Part of the article on "Probability" in the *Encyclopædia Britannica* (ed. 11). The various species of averages are simply and clearly described by Zizek, *Die statistischen Mittelwerte* (1908); translated under the title *Statistical Averages* by W. M. Persons (1913).

The use of the *Median* advocated in the article on the *Choice of Means*, referred to in the article on AVERAGES, has been further defended by the same writer in the *Philosophical Magazine* (December 1923), and, with special

reference to index-numbers, in the *Economic Journal* (June 1918), and the *Journal of the Royal Statistical Society* (July 1923).

F. Y. E.

AVES, Ernest (1857-1917). Ernest Aves, born at Cambridge, was educated at Trinity College there and took a first class in the Moral Sciences Tripos in 1883.

In 1886 he went to reside at Toynbee Hall in East London, and commenced the study of social and economic conditions to which he was subsequently to devote his life. For twelve years from 1889 he was secretary to the Council of the University Settlements Association, and for seven sub-warden of Toynbee Hall under Canon Barnett.

His work at Toynbee Hall first brought him into touch with Mr. Charles Booth, who invited him to be one of his principal collaborators in the production of his *Life and Labour of the People in London*. Aves was not only responsible for the articles in the earlier volumes of that work on the Building and Furniture Trades, into the conditions of which he had made extensive and laborious enquiry, but in the ninth volume he produced together with Booth the profound survey and analysis of the whole industrial field in London which is comprised in Part III. of that book. His study of Trades Unions, hours of labour, and irregularity of earnings formed a contribution of much value both to the contemporary investigation of such questions and to the judgment that History will ultimately pass on the Industrial Age.

In 1907 appeared his own *Co-operative Industry*, a careful study of what co-operation has accomplished, especially for the town-dweller in recent years, not merely in the domain of diminishing costs and increasing accessibility, but also in regard to what may be called elementary economic education.

He also contributed various articles to the *Encyclopædia Britannica* on wages, hours of labour, and kindred questions, and a large number of papers on economics and sociology to economic reviews.

Aves was a prominent pioneer of that large army of voluntary or quasi-voluntary workers in the social field which in the last generation or two has by its industry and the significance of its task almost established itself as a miniature civil service in this country. J. H. M.

[BANKING*], BANKS.*—The Commonwealth Bank of Australia was established in December 1911 by a special Act of Parliament of the Commonwealth of Australia. It was the first, and, so far, the only entirely State-owned bank of the British Empire. The Commonwealth Government is responsible for all the moneys due by the bank, and thus there is ample guarantee for the safety of funds entrusted to its care. Another singular fact is that it has no capital and has up to the present needed none, though provision exists for the bank to issue capital stock up to £10,000,000. One half of the net profits is credited to the bank's reserve fund, and the other half to a redemption fund. The latter may be utilised to pay off Government debts or State debts taken over by the Commonwealth. In time, therefore, the accumulated profits of the bank might conceivably be large enough to wipe out Australia's public debt. On its establishment the accounts of the Commonwealth Government were transferred to the bank. The growth of the bank has been extraordinarily rapid. It started in 1912 with a loan of £10,000 from the Commonwealth Treasury, but by 1922 it possessed assets of over £140,000,000, while depositors numbering over 843,000 had balances at their credit exceeding £36,000,000. The bank transacts both general and savings bank business, and in 1922, in addition to its sixty branches, had 3200 savings bank agencies, mostly at post offices. By the Commonwealth Bank Act, 1920, which repealed the Australian Notes Act, the management of the Australian note issue passed to the Commonwealth Bank, with the result that the whole business of distributing and withdrawing Australian notes is now in its hands. At this time the total of notes outstanding was £55,012,564, including the holdings of all the banks. The gold reserve was £23,309,622, representing 42·37 per cent of all notes outstanding.

The Imperial Bank of India was constituted under the Imperial Bank of India Act 1920 for the purpose of taking over the undertakings and business, as from 27th January 1921, of the three Presidency Banks, the Bank of Bengal, the Bank of Bombay, and the Bank of Madras. For many years these banks had been regarded as semi-official institutions, and as "bankers' banks," and it had been felt that their interests were common and demanded a co-ordinated policy. During the period of the War, friendly, though informal, co-operation emphasised this feeling of mutual interest. Moreover, the events of the period had brought the Government into closer touch with these banks, and it was important that these relations should continue. The provision of up-to-date banking facilities was essential for the proper development of industrial India, the more so because of the people's predilection for holding their savings in a metallic form. The earlier discussions on the subject were in the direction of the creation of a State Bank, but for various reasons the proposals fell through, and instead

the amalgamation scheme was adopted. The shares in the Presidency Banks were exchanged, with some adjustments, into shares of the new bank, and the capital increased to Rs. 1125 lakhs, of which one-half was to be paid up at the outset. The governing body, or Central Board, of the bank was designed to secure adequate representation of all important interests concerned, including Government, Local Boards, the shareholders, and the general public. In accordance with the by-laws, the discharge of the functions of the Central Board was delegated to a small managing committee, meeting regularly and exercising the full administrative powers of the Central Board, subject to any special instructions which it might receive from that body. The appointment of the bank as the sole banker for the Government of India will, it is confidently expected, result in considerable economy, as it will release for the benefit of trade the funds which previously have been locked up in the separate reserve treasuries, and at the same time the public will be provided with facilities for the transfer of money at a moderate charge. The bank has undertaken to establish and maintain, within five years from the commencement of the Act, not less than one hundred new branches, of which at least one-fourth will be established at such places as the Government may direct. A London Office has been opened to conduct business on behalf of the bank's own constituents and to re-discount bills of exchange for the Exchange and other banks, but the bank will not compete with the Exchange Banks in the ordinary exchange business. From what has been said it will be seen that the position of the Imperial Bank differs in material respects from that of central banks in countries where there already exists a highly developed banking system and a central discount market. The policy with regard to the administration of the note issue and the London remittance business of the Government has been left for future decision.

[For further details, see *Economic Journal*, vol. xxxi. p. 147.]

The South African Reserve Bank was established at Pretoria by Act of the South African Parliament in 1920, following the Report of a Select Committee on the Embargo on Export of Specie. The Act provided for a capital of £1,000,000, of which one half was to be subscribed by the South African Banks in proportion to their capital and reserve funds. The other half was offered to the public, and any part of it not subscribed by the public was to be taken up by the Treasury. The bank's dividend was limited to 10 per cent, but while there is an embargo on the export of gold from South Africa, or so long as gold certificates are inconvertible, it may not pay a dividend of more than 6 per cent per annum, and all excess profits during such period must be placed to a special fund for strengthening the gold reserve of the bank. When the reserve fund is equal to the paid-up capital, the net profits, after payment of a dividend of 10 per cent, are to go to the Government. The sole right to issue notes in South Africa was given to the bank for twenty-five years, and the commercial banks ceased to issue their notes on 1st July 1922. The note circulation on 31st March 1923 amounted to £9,866,414. The Reserve Bank notes are to be secured by at least 40 per cent in gold cover, and as to the remainder by commercial paper or trade bills, and by a first charge on all the assets of the bank. These reserve requirements may be temporarily suspended with the consent of the Treasury and subject to the payment of a graduated tax on the note issue, rising as the gold reserve falls below 40 per cent, and subject also to a corresponding increase in the interest and discount rates of the bank. The Act further required all banks transacting business in South Africa to maintain reserve balances with the bank equal to 13 per cent of their demand liabilities and 3 per cent of their time liabilities. The bank is administered by eleven directors, of whom three experienced in banking and finance are nominated by the stock-holding banks and appointed by the Governor-General, and three, who must at the time of their election be actively engaged in commerce, agriculture, or some other industrial pursuit, are elected by stock-holders other than banks, and five (including a Governor and Deputy Governor) appointed by the Governor-General. Branches may be established by the bank within the Union, and, with the consent of the Government, outside the Union, and the bank may, subject to certain restrictions, carry on the usual business of bankers. The most important of these restrictions are that it may not advance money on mortgage nor own fixed property, except for its own business premises, that it may not make unsecured advances, draw or accept bills otherwise than on demand, accept deposits for a fixed term or allow interest on credit balances on current accounts.

[See also *Economic Journal*, vol. xxxi. p. 172.]

F. W. G.

BANK NOTE (United States of America).* The note circulation of the national banks was until the organisation of the Federal Reserve System in August 1914 the only authorised bank note. This circulation was regulated, in the main, by the provisions of the Acts of 1863, which required that all issues be secured by United States bonds deposited in the Treasury. Conditions relating to such deposits and their relation to the amount of notes issued were from time to time changed, but at present bonds may be deposited in a sum equal, for each bank, to the amount of its capital stock,

the notes issued to it then being equal to the par value of the bonds so deposited. Originally limited in aggregate amount, such limitation was later removed, so that the note circulation of the national banks had reached about $730,000,000 in 1914, and was chiefly restricted at that date by the scarcity of so-called circulation bonds. The obvious defects of this type of note issue led to the insertion of a provision in the Federal Reserve Act which released national banks from the necessity of depositing bonds with the Treasury in any amount as a condition of the retention of their charters, although it permitted the banks to continue, if they chose, to deposit such bonds; and to receive back circulation up to the amounts permitted by law, should they so desire. Banks already holding the bonds were to be protected by a provision which permitted the Federal Reserve Board to order the purchase of such bonds from "member banks" at the rate of $25,000,000 per annum. With the entrance of the United States into the World War, such purchases were suspended, and the amount of notes outstanding remained about stable, being in the middle of 1924 approximately $730,000,000. The Federal Reserve Act sought to provide for an elastic currency. It directed that the chairman of each Federal reserve bank should receive from the governing authorities of the bank, at their discretion, discounted paper held by them, and in exchange should issue Federal reserve notes in amount equal to the face of the paper. The bank itself was required to hold a gold reserve of 40 per cent against these notes (but of this 40 per cent, 5 per cent was to be on deposit with the Treasurer of the United States for the purpose of making conversion of gold into demand). In later amendments, provision was made for direct deposits of gold with the Federal reserve agents, while the holding of a gold reserve in the vaults of the bank was dispensed with, provided that the Federal reserve agent himself was in possession of gold equal to 40 per cent of the notes outstanding. An issue of $100,000 of Federal reserve notes might thus be represented by $60 eligible paper in the hands of the Federal reserve agent, $35 gold, also in his hands, and $5 in the hands of the Treasurer. In these circumstances, the Federal reserve note to-day evidently represents a fluctuating base partly composed of eligible paper and partly of gold. The note issue has shown considerable elasticity even under these conditions; and at present the amount outstanding (end of June 1924) is about $2,400,000,000. Federal reserve notes are a first lien on the assets of the bank issuing them, and are also the obligations of the United States Government, but they are not legal tender although payable to the Government in liquidation of taxes, customs, and other public dues. At the same time, the Federal Reserve Act made provision for a new type of currency entitled "Federal reserve bank notes." These were to be in all respects similar to the old national bank notes, resting on the bonds purchased by the reserve banks as previously explained, while safeguarded in exactly the same way as regards redemption, by a 5 per cent fund with the Treasurer of the United States. These notes were called into existence to an unexpected extent during the war, for the purpose of replacing the silver certificates. The issue of the certificates had been suspended, and those outstanding withdrawn, so that new notes were, in the opinion of Congress, required in order to furnish a currency to fill the "vacuum" caused by the withdrawal of the certificates. As silver was repurchased under the Pittman Act subsequent to the close of the war and new certificates reissued, the Federal reserve bank notes have been retired, so that to-day (middle of 1924) the outstanding amount of Federal reserve bank notes in actual circulation is not more than $325,000. Until 1914, the note circulation of the National Banks, which provided about $730,000,000 of paper currency, was arranged upon the well-known bond deposit principle (see BANK NOTE, UNITED STATES OF AMERICA). This bond-secured issue had long been regarded as undesirable, and the Federal Reserve Act of 23rd December 1913 provided for its retirement. This plan proved unsuitable to the times, owing to the opening of the War and the entry of the United States into the conflict, so that the national bank note system has remained practically unchanged in amount. The "Federal reserve notes" provided for in the Federal Reserve Act were intended to be true bank notes, regulated in their amount by the volume of rediscounts with the Federal reserve banks. Later, and partly as a result of war conditions, they came to be based either upon gold or discounted paper, while the latter was allowed to include the direct notes of member banks protected by national bonds as collateral. During the latter part of the War, when the quantity of such collateral was very great, the distinction between these Federal reserve notes so protected and the national bank notes was one of theory only. In addition to the Federal reserve notes, the Act also authorised Federal reserve banks to issue "Federal reserve bank notes" protected by national bonds exclusively, and hence exactly identical with national bank notes. The redemption of all notes of these three kinds is now carried on at the place of business of the issuing bank: the national bank notes and the Federal reserve bank notes in "lawful money of the United States," toward which a 5 per cent

in lawful money on the extent of the note circulation is required to be constantly kept on deposit with the Treasurer of the United States, who also directly redeems the note on demand. The Federal reserve notes are redeemable at their place of issue, in gold, at the Treasury (like the other notes), and at other Federal reserve banks (in gold or lawful money). The safeguards behind the national bank notes and Federal reserve bank notes are (1) Government bonds equal to face; (2) limitation of the notes of the national banks to capital; (3) a 5 per cent redemption fund in the Treasury. Federal reserve notes are protected by (1) 100 per cent paper or paper of eligible character or gold (the latter not less than 40 per cent) in the hands of a Federal reserve bank or its chairman; (2) 5 per cent gold (counted as part of the 40 per cent mentioned above) with the Treasurer of the United States, and various provisions for enforcing the prompt return of the notes to their issuer. National bank notes are practically a stationary element in the circulation and Federal reserve bank notes a declining element. Federal reserve notes have largely displaced gold certificates, and their increase or decrease is largely due to changes in current demand for circulating medium or to fluctuations in the volume of business.

H. P. W.

BARTON, JOHN,* is praised by Ricardo, who quotes from his essay on "The Condition of the Labouring Classes of Society" and adds: "Mr. Barton, in the above publication, has, I think, taken a correct view of some of the effects of an increasing amount of fixed capital on the condition of the labouring classes. His Essay contains much valuable information." *Principles*, 3rd edition, 1821, p. 480. He is also quoted by Malthus, *Political Economy*, p. 261; Marx, *Das Kapital*, i.[5] 655, and *Theorien über den Mehrwert*, 1905, ii., 2nd part, p. 370; Villermé, *Tableau de l'état physique et moral des ouvriers*, 1840, II. pp. 20-21.

S. B.

BAUDRILLART, HENRI JOSEPH LÉON (1821-1892), was in 1852 appointed deputy professor to Michel CHEVALIER in the Collège de France; in 1866 he was called to the chair of history of economic doctrines in the same *collège*. He was also Professor of Political Economy in the École des Ponts et Chaussées and a member of the Académie des Sciences Morales et Politiques.

An untiring and well-informed investigator of historical, philosophical, and economic matters, it may be said that as an economist his ruling preoccupation has been to demonstrate that no contradiction exists between the doctrines of the liberal school, to which he belonged, and the rules of conduct as laid down by moral science. These views he already defended in one of his first and principal works, *Les Rapport de la morale et de l'économie politique* (Paris 1860), and thirty years later, in the article "Morale" which he contributed to Léon Say's *Nouveau Dictionnaire d'économie politiqu* (1892).

The first book, by which he attracted the notic of learned circles, is his volume on *Jean Bodin e son temps; tableau des théories politiques et de idées économiques au seizième siècle* (Paris, 1853) describing after an introduction on the leadin economic and political ideas of the period, th life and writings of Bodin, and giving a full analysi with commentaries of his *République*. It remain the standard book on the subject.

Baudrillart's *Histoire du luxe public et priv depuis l'antiquité jusqu'à nos jours* (Paris, 4 vols. 1878 and 1880) is another outcome of his favourit studies on the reciprocal influences having existe and existing between ethics and social economics it is a sort of encyclopedic and historical accoun of the character of public and private luxury fro the dawn of history to our own times.

The three volumes of his *Populations agricole de la France* (Paris, 1880 to 1893) were written a the report of an extensive inquiry entrusted to hi care by the Académie des Sciences Morales et Poli tiques. The first volume comprises Normandy an Brittany; the second Maine, Anjou, Touraine Poitou, the country around Paris, Picardy, an Artois; the third volume on Central France wa published by his son after his death, and is in fac as much the work of the son as of the father The object of his inquiry was, not cultivatio itself, but the moral and material situation of th agricultural populations; to reach his aim, h combined direct observations of the present wit the study of the past.

Baudrillart was also a frequent contributor t the *Journal des économistes*, to the *Revue de deux mondes*, and to Franck's *Dictionnaire de sciences philosophiques*. Besides the four larg works mentioned above, he published: *Manu d'économie politique* (1857); *Études de phil sophie morale et d'économie politique* (1857) *Publicistes modernes* (1862); *La Liberté d travail, l'association et la démocratie* (1865) *Éléments d'économie, rurale, industrielle et com merciale* (1867); *Économie politique populair* (1869); *La Famille et l'éducation en Fran* (1874).

E. Ca.

BILLS OF EXCHANGE ACT 1882 AMENDMENT AND INTERPRETATION OF. I the case of Capital and Counties Bank Gordon [1903], A.C. 240, the House of Lord decided that where a banker credited a custome with a crossed cheque as cash before receivin payment thereof, he did not subsequentl receive payment only for the customer, bu for himself, so that in the event of a forge endorsement, he lost the protection of sec. 8 of the Bills of Exchange Act 1882, and wa liable for conversion, or money had and received to the true owner. To obviate the risks an inconvenience occasioned to bankers by th

decision, the Bills of Exchange (Crossed Cheques) Act 1906 was passed, after several previous futile introductions. It enacts that "a banker receives payment of a crossed cheque for a customer within the meaning of sec. 82 of the Bills of Exchange Act 1882, notwithstanding that he credits the customer's account with the amount of the cheque before receiving payment thereof." Presumably crediting in the pass-book is included, not only the uncommunicated entry in the bank-books. The effect of the Act appears to be confined to cheques, *i.e.* bills of exchange drawn on a banker payable on demand, excluding orders for payment conditional on signature of an annexed receipt and drafts drawn by a branch on head office of the same bank, or *vice versa*, both of which were held in the Gordon case not to be cheques. The new Act further affects only the position between the collecting banker and the true owner, leaving untouched the other rights and liabilities arising from such crediting as cash. These, as deducible from the Gordon case, include the right of the customer to draw against uncleared cheques credited as cash, in the absence of any agreement to the contrary express or implied, and the right of the banker to debit his customer with such cheques, if returned unpaid, or to sue the parties thereto, irrespective of the state of the customer's account.

Two other points were finally decided by the above case: First, that a collecting banker can acquire no protection by crossing to himself, under sec. 77 (6), a cheque received by him uncrossed. Second, that a banker's draft, of the nature before mentioned, though not a bill or cheque, is a draft or order drawn on a banker within the meaning of sec. 19 of the Stamp Act 1853, so that the banker is not liable for paying such documents on a forged endorsement. Again, apart from legislation, sec. 7, subsec. 3 of the Bills of Exchange Act received a somewhat narrow interpretation in the two cases of Vinden *v.* Hughes [1905], 1 K.B. 795, and Macbeth *v.* North and South Wales Bank [1906], 2 K.B. 718, affirmed by C.A. Oct. 16 [1907], 123 L.T. p. 529, in which it was held that the payee of a cheque who is existing and intended to receive the money is not fictitious or non-existing within the meaning of the subsection, though the drawer was not indebted to him, and his name was suggested or even inserted by a third person merely to give colour to the transaction for his own ends. In Colonial Bank of Australasia *v.* Marshall [1906], A.C. 557, the Judicial Committee of the Privy Council decided that the leaving blank spaces when drawing a cheque is not a sufficient breach of the customer's duty to his banker to justify the latter in debiting the customer with more than the original amount of the cheque, should that amount be fraudulently raised and the larger sum paid by the banker innocently and without negligence. The old, but somewhat discredited case of Young *v.* Grote, it was held, can no longer be regarded as of any authority. (See BILL OF EXCHANGE.) J. R. P.

Under the Bills of Exchange (Time of Noting) Act 1917 (7 & 8 Geo. V. c. 48), when a dishonoured bill is noted, it need no longer be noted on the day of its dishonour. It may be noted on that day, "and must be noted not later than the next succeeding business day." This Act was passed to give relief when there was a shortage of notaries' clerks during the late War. M. D. C.

BIRTH-RATE.* The decline of the birth-rate in this country and many others during recent years is remarkable. Among numerous books and articles investigating the causes of this phenomenon, Yule's pamphlet on *The Fall of the Birth-rate* (1920) deserves particular mention. The select references which he gives will enable the reader to pursue the investigation of causes. The facts are to be gathered from the Reports of the Registrars of births, deaths, and marriages in Great Britain and Ireland, and the corresponding official returns in other countries; together with the Summaries published from time to time in the *Journal of the Royal Statistical Society*, and other learned periodicals. F. Y. E.

BLOCK, MAURICE (1816-1901). Born in Germany, but educated in France, he became a Frenchman by naturalisation as soon as he was of age, and was attached from 1843 to 1861 to the statistical department of the ministry of Agriculture, Industry, and Trade; in 1880 he was elected a member of the *Académie des sciences morales et politiques*.

An untiring worker in the field of statistics, Block edited during forty-four years (1856-1900) the *Annuaire de l'économie politique et de la statistique*; he also published the *Statistique comparée de la France* (2 vols., 2nd edit. 1875); the *Traité théorique et pratique de la statistique* (1886), and several works of reference, such as the *Dictionnaire de l'administration française* (4th edit. 1898), the *Dictionnaire général de la politique* (1874), and the *Petit dictionnaire politique et social* (1896).

Conversant with most European languages, Block from 1866 to the end of his life wrote for the *Journal des économistes*, a quarterly review of periodical economic publications issued out of France (*Revue des principales publications périodiques de l'étranger*). He condensed the fruits of his extensive reading and of his lifelong interpretation of foreign thought in the two volumes of his *Progrès de la science économique depuis Adam Smith* (two editions, 1890 and 1897). The plan adopted is the treatment of each subject (nature, labour, capital, credit, etc.) in a distinct chapter; at the beginning the present state reached by science is exposed, and at the end the views of the

leading French and foreign economists are summed up, mostly in their own words.

A clear and exact thinker, with a tendency to sarcastic humour, Block remained faithful to the doctrines prevalent at the time of his youth, and considers reason a safer scientific guide than feeling and ethics. E. Ca.

BOARD OF TRADE.* In 1904 Lord Jersey's Committee suggested that the President of the Board should receive the position of a Secretary of State and be given the title of Minister of Commerce and Industry. This recommendation was not carried out, but it was decided that the salary of the President should no longer be limited as it had been under the Board of Trade Act of 1826. The Board of Trade Act of 1909 decreed that the President should be paid such annual salary as Parliament might determine. The increased salary (£5000 per annum) was first paid for the year 1910.

The history of the last forty years has shown a continuous expansion in the duties which the Board of Trade has been called upon to perform. This in turn has led to a multiplication of Departments within the Board, and finally to the development of certain new ministries (those of Labour and Transport). In 1883 the passing of the Bankruptcy Act brought about the establishment of the Bankruptcy Department. In 1909 the Companies Department was created for the purpose of registration and regulation of Joint Stock Companies. The administration of the Trade Boards Act, the Labour Exchanges and Unemployment Insurance involved the Board in additional duties. As a result, a division took place in the Commercial, Labour and Statistical Department, the Labour Department remaining in charge of the Controller-General and the Commercial Department being put in charge of an Assistant Secretary. In 1911 an Industrial Council was set up and a Chief Industrial Commissioner's Department was created, which took over the powers of conciliation and arbitration previously exercised by the Labour Department. In 1913 the administration of the Labour Exchanges and Unemployment Insurance was transferred to a separate Department with an Assistant Secretary; the collection of Industrial Statistics was also transferred to a Department of Labour Statistics under the control of a Director. The Labour Department then ceased to exist.

During the War some of the functions of the Board of Trade devolved upon certain new ministries—those of Shipping, Food, Labour, and Transport. Of these, however, only the ministries of Labour (1917) and Transport (1919) have been made permanent. Several new Departments were also created during the War and the years that immediately succeeded it, the chief being the Joint Department of Overseas Trade (established jointly with the Foreign Office) and the Mines Department formed under the Mining Industry Act of 1920. An important memorandum on the Reorganisation of the Board of Trade (Cd. 8912) was issued in January 1918. This memorandum suggested that the Board of Trade should be organised in two main divisions—(1) Department of Commerce and Industry, dealing with vigilance and information. (2) Department of Public Services, possessing administrative functions. Stress was laid on the formation of an Intelligence Department, to be known as the "General Economic Department," within the first division.

The following Departments now exist within the Board of Trade—(1) Secretariat, (2) Intelligence and Parliamentary, (3) Commercial Relations and Treaties, (4) Industries and Manufactures, (5) Industrial Property, (6) Standards, (7) Statistics, (8) Mercantile Marine, (9) Companies, (10) Bankruptcy, (11) Legal, (12) Finance, (13) Establishment, (14) Board of Trade Journal, (15) Mines, (16) Overseas Trade. The two latter are administered by Parliamentary Secretaries.

[See Commercial Intelligence, below; *Report of Committee on Machinery of Government*, 1918; *Memorandum with respect to the Reorganisation of the Board of Trade*, 1918; *Committee on Staffing and Methods of Work in the Board of Trade*, 1921.] E. L. H.

BOCCARDO, Girolamo (1829-1904), born in Genoa, died in Rome. He began his career as a journalist in 1848, but refused to enter into political life when Cavour offered him the undersecretaryship of the ministry of Agriculture, Industry, and Commerce. He was president of the Technical Institute of Genoa and professor at the university. In 1877 he was appointed senator, and in 1888 councillor of state. As an economist he was a very learned but not original thinker. He worked for the diffusion of economic science by writing in 1853 a very concise and clear manual of political economy, substantially on the lines of John Stuart Mill and his French contemporaries, a manual which had a great success, especially among students preparing for examinations in public offices where political economy was requisite and amongst students of technical institutes. In 1859 he published a *Universal Dictionary of Political Economy and Commerce*, which was republished 1875. But Boccardo influenced the studies of political economy more particularly when he succeeded Ferrara in the editorship of the *Biblioteca dell' Economista*. Ferrara used to say he knew of no German economist worth reading except Roscher, and would not publish translations of German economists; Boccardo went in the opposite direction and opened the *Biblioteca* to all dissenters from the so-called classical school (see Classical Economists). He published, besides Roscher, Schäffle,

WAGNER, Schönberg, MARX, LASSALLE, and amongst the English MACLEOD and OWEN. Boccardo, very naturally, considering his receptive mind, was under the sway of SPENCER'S evolutionism, and strongly inclined to sociological studies. His prefaces to the economists whose works he published are easy and interesting reading, like articles in the *Revue des Deux Mondes*; but they are very far from being comparable to those of Ferrara, his predecessor. The principal subjects they discuss are: the economic and social problem in Germany; the heretics of political economy and social legislation; the principles of science and art in finance; quantitative methods applied to economics, statistics, and social science; the philosophical principles of political economy; method and limits of political economy; man and animal; sociology in history, science, religion, and the Cosmos; credit and banks. In these essays he tried to render classical and political economy more complete and correct by utilising mathematics, biology, and history. Boccardo published also JEVONS and WALRAS. Besides these purely scientific publications, he took a very active share in questions of the day, concerning the Italian banks of issue, forced currency, mercantile marine, labour problems. He was a free trader and opposed socialism on many occasions. When wearied with economic studies he used to turn to physical geography, and wrote on earthquakes and volcanoes, and also on the physical structure and formation of our globe. He was a man full of character, and esteemed for his strong sense of duty. M.P.

BÖHM-BAWERK, EUGEN VON (1851-1914), was one of the founders of the Austrian School of Economists. He and Friedrich von Wieser were united in a community of studies and an unbroken friendship which dated back to the first form of the Gymnasium. These two were the first who took up and developed the exact economic theory which Carl MENGER had published in his *Grundsätze der Volkswirtschaftslehre*, 1871, but which had till then remained almost unnoticed. Böhm-Bawerk's extraordinary intellectual vigour enabled him, in addition to his rich and varied scientific work, to do as much as an official and statesman as would have completely filled the life of a less gifted man.

On completing his studies, Böhm-Bawerk went into the Austrian Ministry of Finance, then qualified in 1880 as a Privatdozent (lecturer) in Political Economy in the Vienna University, and in 1881 became Assistant Professor, and later Professor of this faculty at Innsbruck. In the few years that he taught there, he completed the two volumes of his chief work, *Kapital und Kapitalzins*, which brought him an international reputation. In 1889 he was called to Vienna as an expert in the Finance Ministry in order to draft the Government bill for the reform of direct taxation. Austria at that time had a system of direct taxes on produce, which had mainly been introduced as war taxes. Their assessment and method of collection were consonant neither with justice nor good policy in taxation. Böhm-Bawerk's bill remedied the worst defects of these taxes on profits and also introduced a modern income tax. His political tact enabled him to steer the bill through the difficulties of Parliament. His sound judgment and foresight were proved by the great success which attended the reformed taxes, both in their financial yield and the extraordinary improvement they produced in taxation morale. From 1895 onwards, Böhm-Bawerk was three times Finance Minister. On the first two occasions he held office only a short time; but the third time, in 1900, it was his fortune to hold office for almost five years. In the interval between his periods of office he was one of the Presidents of the Administrative Court of Appeal (*Verwaltungsgerichtshof*) as the head of the Tax Division.

Böhm-Bawerk's successes as a statesman were a brilliant refutation of the criticisms brought against the Austrian theory for its hyper-abstraction and lack of connection with real life. Without the clearness which his scientific training imparted he would not have made so great a success. When he retired from office, he left to his successors a well-organised state household, a well-filled exchequer and a brilliant budget. The Austrian State credit had so much improved that Böhm-Bawerk had been able to carry out a conversion of the public debt. The Government offered the retiring Minister the highly paid post of a Governor of the Austrian Mortgage Bank (*Bodenkreditanstalt*). He, however, declined this offer in order to devote himself entirely to his scientific work, and took a professorship at Vienna which he held till his death.

Böhm-Bawerk's scientific work has a twofold content. First of all he did great service in using his brilliant powers of exposition to make known the doctrines of the AUSTRIAN SCHOOL to a wider circle of readers at home and abroad. His first publication of this sort was the *Grundzüge der Theorie des wirtschaftlichen Güterwertes* (Principles of the Theory of the Economic Value of Goods), which appeared in the *Jahrbücher für Nationalökonomie*, Jena, 1886. Here he united the doctrines developed by Carl Menger and Friedrich von Wieser, successfully widening their scope in regard to the theory of prices. His rare critical gifts enabled him to defend the Austrian School against the many attacks to which it was exposed in the early days of its existence. At the same time, he gave proof of his vigour in debate by a constant discussion and criticism of the new works on the theory of value, price and capital. Of the controversies he carried on,

the most to be noted are that with Dietzel in the *Jahrbücher für Nationalökonomie*, Jena, 1890-92; with Josef Schumpeter in the *Zeitschrift für Volkswirtschaft*, Vienna, 1913; and with John B. Clark in the *Quarterly Journal of Economics*, vol. ix.

The main theme of his scientific work is the subject of capital and interest. The first volume of his chief work shows him in his full mastery of fertile criticism. In the whole range of the moral sciences there is no history of the development of thought which presents its material with more power of insight and persuasion. The second volume develops the theory of capital, and, above all, of interest on capital. The Austrian theory of value and price is here used as a basis and its most important problems searchingly examined. Böhm-Bawerk's theory of interest is based on the idea that future needs are put low in proportion to their remoteness, an idea which introduces the time-factor into economic calculation. Böhm-Bawerk's theory of interest has found staunch adherents and obstinate opponents in equal numbers. But even if one disagrees with its root idea, it is impossible not to recognise the profound insight which Böhm-Bawerk acquired in his researches in economic theory.

[Cf. Carl Menger's obituary of Böhm-Bawerk in the *Almanach der Wiener Akademie der Wissenschaften*, 1913. It gives a list of his writings and the most important articles, etc., on his economic work. Cf. also Joseph Schumpeter's brilliant obituary, entitled "The scientific life-work of Eugen von Böhm-Bawerk," published in the *Zeitschrift für Volkswirtschaft*, Vienna, 1914. Cf. also the article on AUSTRIAN SCHOOL OF ECONOMISTS.] F. W.

BOOTH, CHARLES (1840-1916), shipowner, merchant, manufacturer and investigator, was born and educated at Liverpool. He received his business education in the office of Mr. Lamport of Messrs. Lamport & Holt's Steamship Company. He then joined his brother Alfred in a business in America. In 1866 the two brothers invested the whole of their fortune in the purchase of two steamships, the small beginning of the large undertaking afterwards known as the Booth Steamship Company. In early youth he was an enthusiastic Radical and a member of the Birmingham Education League. While working excessively long hours for the success of his business, he gave much time and thought to the affairs of the Liverpool Trades Hall. He was at the time greatly influenced by the writings of Comte, but never joined the Positivist body. In 1871 he married Mary, daughter of Charles Zachary Macaulay. Owing to overwork he had become subject to a form of nervous indigestion which compelled entire rest for more than two years, part of which he spent in Switzerland. In 1876 he went on one of his company's steamers to Brazil to test the working of a small boiler with a very small consumption of coal; the long sea voyage renewed his health, and although always limited to an abnormally abstemious diet, his health ceased to stand in the way of exertion for many years. Living in London, he took part in discussions among the Socialists and at Toynbee Hall and Oxford House, and attended the meetings of the Social Democratic Federation, himself giving an address on the best principles of land ownership. He became convinced that no true remedies for social evils could be discovered until their conditions had been investigated and analysed. He turned first to the statistical material at hand, and in 1886 read a paper to the Royal Statistical Society on the *Occupations of the People of the United Kingdom, 1801-81*. Deciding that personal observation should precede general statistical summary, he started on his long and costly survey of the conditions of the people in London, intending at first to limit his investigations to East London. In its final form the work falls into three series, under the title of *Life and Labour of the People in London*, the first, *Poverty*, consisting of four volumes; the second, *Industry*, of five volumes, and the third, of seven volumes, under the generic title, *Religious Influences*. A seventeenth volume, *Conclusions and Survey*, completed the work. The celebrated Descriptive Map of London Poverty, showing the streets coloured according to the general conditions of the inhabitants, forms part of the first series. The statistical basis of his social classification of the people was found in the records kept, for their official schedulings, by the Visitors of the London School Board. The execution of the scheme required the response of large numbers of departments, authorities, organisations and individuals—employers, Trade Union officials, workers, administrators, clergy, and those engaged in social and charitable activities. The work, although scientific in character, had the direct end of providing a body of analytical fact that could be put to practical uses. The first volume was published in 1889, the last in 1903. In the meantime he had become the responsible head of his firm; this entailed yearly visits to the United States—sometimes more than one—and occasional visits to Brazil. Also during those years he began his crusade in favour of pensions for the aged, making his proposals for universal non-contributory pensions in 1891 and attaining a partial success by the passing of the Old Age Pensions Act, 1908; he disliked the poverty qualification laid down by it. Greatly interested in fine art, he bought Holman Hunt's replica of the "Light of the World" and sent it on a tour round the Empire; on its return it was accepted by the Dean and Chapter of St. Paul's to take its place in the Cathedral. In 1904 he was appointed a member of the Privy Council.

From 1905-7 he gave much time to his duties as a member of the Royal Commission on Poor Laws, but owing to ill-health resigned before the consideration of the Report. He supported Joseph Chamberlain's Fiscal Policy and joined the Unionist party, but "he was anything but a good party man." He was an enthusiast in his business life, and said "that no leader of a great merchant enterprise was worth his salt whose mind was not for some part of every day living in a time three or four years ahead and who was not mentally preparing himself to face the exigencies of that distant time." In 1913, in a pamphlet on *Industrial Unrest and Trade Union Policy*, he gave a glimpse of the characteristic qualities which he knew business demanded. "Enterprise, however maintained and controlled, is the dominant factor in every undertaking. Capital relies on past accumulation, labour on present activities, and enterprise on future results. Successful industrial enterprise finds its normal reward and the measurable test of its industrial success in profit. Loss is the normal and measurable penalty of failure." "Capital is wealth transmuted and vitalised by industrial enterprise." Enterprise includes "forethought, guidance, the capacity to plan, the nerve to execute, the whole genius of mind and character." Thus defined, Charles Booth's endowment of this quality was of the highest order; from first to last the material success which was its inevitable accompaniment presented to him "the problem of poverty in the midst of wealth." He possessed marked intellectual courage, great kindness of heart and wide sympathies. To an exceptional degree he possessed the power of recognising and respecting human personality, and his interest in its ordinary manifestations never flagged.

He was elected a Fellow of the Royal Society; honorary degrees were conferred on him by Cambridge, Oxford, and Liverpool; he was a member of the Political Economy Club and the Economic Club. Elected a Fellow of the Royal Statistical Society in 1885, he served on its Council from 1886, first as member, then as President, and afterwards as Hon. Vice-President until his death. He invariably submitted the statistical methods and results of his inquiries to the Society for criticism before publication in their final form, and from 1886 to 1894 its Journals contain the best records of his work and the value attached to it by his contemporaries.

[In addition to publications mentioned above: *Dock and Wharf Labour* (charts with letterpress), 1892; *Pauperism, a Picture, and Endowment of Old Age, an Argument*, 1892.

The Aged Poor in England and Wales, 1894.

Old Age Pensions of the Aged Poor. A Proposal, 1899 and 1906.

Improved Means of Locomotion as a cure for Housing Difficulties of London, 1901.

Rates and the Housing Question in London. An Argument for the rating of site values, 1904 (a reprint from *Life and Labour*).

Poor Law Reform memoranda submitted in 1907 *to R. C. on Poor Laws*, 1910 and 1911.

Family Budgets, No. 9, also *Introduction*, 1896.

For biography—*Charles Booth, a Memoir*. Obituary notices by Ernest Aves in *Economic Journal*, December 1916, and in *Journal of Royal Statistical Society*, January 1917.]

C. E. C.

BOUNTIES ON SUGAR.* A conference on sugar bounties was summoned by the British Government to meet in London in 1887, and a Convention was signed in 1888 by Austria, Belgium, Germany, Great Britain, Italy, the Netherlands, Russia, and Spain. The countries signing the Convention agreed to abolish all direct and indirect bounties and to impose prohibitive duties on bounty-fed sugar. The Convention was not, however, ratified, and in 1896 the bounties offered by the Governments of Germany and Austria-Hungary were roughly doubled. In 1898 a fresh conference was held at Brussels for the purpose of establishing a sugar convention. Difficulties arose, however, over the fact that the British delegates were not authorised to consent to a system which would place countervailing duties on bountied sugar. Moreover, France would not agree to the abolition of all bounties, and Russia refused to join the conference on the ground that her fiscal arrangements were not equivalent to a bounty on the export of sugar. Negotiations therefore lapsed, but in 1901 another conference was summoned at Brussels by the Belgian Government. As a result of this conference a Convention was signed between Germany, France, Austria-Hungary, Great Britain, Belgium, Holland, Italy, Sweden, and Spain, Russia refusing to take part in the arrangements. It was agreed that all direct and indirect bounties should be removed; the excess of the import duty over the excise was fixed; and the obligation was placed upon all countries signing the Convention to place an additional tax on all bounty-fed sugar. The Convention was ratified in 1903 and was intended to last for five years. In 1907 Russia was admitted to the Convention under special conditions. Great Britain agreed that the British differential duties should lapse, and Russian sugar be admitted on equal terms. Denunciation of the Convention was demanded by certain members of Parliament, who maintained that the duties on bountied sugar had raised prices. Finally in 1913 the British Government withdrew from the Convention.

Much attention has been devoted to the relation between the bounties on sugar and the West Indian sugar trade. It is noticeable, however, that of the Commissioners who were sent to report in 1897 only one asserted that

the bounties had been the real cause of the downfall of the West Indian trade.

E. L. H.

BUDGET.* The Budgets of the three years following 1910-11 made no important changes.

That of 1912-13 showed the largest realised surplus then on record of £6½ millions. In 1914-15 the national expenditure reached for the first time £200 millions. The expenditure which the Chancellor had to meet was £206 millions; the anticipated revenue fell short of this figure by £5¼ millions. Income Tax and Super-Tax were increased, as were the rates of the Estate Duties. The increases were to produce an additional revenue of about £6½ millions. The outbreak of the Great War in August of that year rendered necessary a Supplementary Budget in November. Reductions in revenue due to the war were expected to amount to £11 millions; £325 millions were required for war purposes. This was provided by Votes of Credit, a war-time expedient which enables the Government to make provision for expenditure as and when required, without the necessity of submitting detailed estimates to the House of Commons. The duty on tea was increased from 5d. to 8d. per lb., the duty on beer was raised, subject to certain rebates, to £3 : 9s. for every 36 gallons of a specific gravity not exceeding 1215 degrees, and to £4 : 0 : 10 where that figure was exceeded. Income Tax and Super-Tax rates were doubled. The additional taxation was expected to produce £10 millions, leaving a deficit of £323½ millions to be met by borrowing. The total provision for the year was £532½ millions. The addition to debt in the year was £458 millions.

In 1915-16 an expenditure of £1132⅓ millions was anticipated, of which £978 millions was required for the Votes of Credit. Proposals were made for increases in the duty on beer and wine, but were abandoned. The New Sinking Fund was suspended. The revenue was expected to amount to £267¼ millions. The deficit of £862¼ millions was to be found by borrowing. In September of that year Mr. M'Kenna, who had succeeded Mr. Lloyd George as Chancellor, introduced a Supplementary Budget, the total required for the year being then £1590 millions. The Votes of Credit amounted to £1420 millions. The duties on tea, coffee, cocoa, etc., were increased by one half; the duty on sugar was raised from 1s. 10d. per cwt. to 9s. 4d. per cwt. or 1d. a lb.; 3d. a gallon was added to the duty on motor spirit; the duty on patent medicines was doubled. An *ad valorem* duty at the rate of 33⅓ per cent was raised upon imported motor cars, cinema films, clocks, watches, musical instruments. These duties were stated to be intended as a war measure for the protection of foreign exchange and the restriction of imports of luxuries. They became known as the "M'Kenna duties." The rates of Income Tax were increased by 40 per cent for the second half of the year. Increases were made in the Super-Tax rates on incomes over £8000. A new tax of 50 per cent was imposed on the Excess Profits over pre-war standards, in trades, manufactures, and businesses. It was called Excess Profits Duty. The additional taxation was expected to produce £31 millions in the year and £102 millions in a full year. The deficit to be made good by borrowing was £1284½ millions. The addition to debt in the year was £1032 millions.

In 1916-17 the expenditure of the year had risen to £1825¼ millions, of which £1600 millions, including £450 millions for advances to Allies and Dominions, were required for Votes of Credit. Customs and Excise duties were still further increased, the main increase being in sugar, the duty on which was raised from 1d. a lb. to 1½d. A new duty was imposed on admission to entertainments, which was expected to yield £5 millions, and a duty was placed on matches. A railway fare duty was proposed but withdrawn. Income Tax rates were raised to a maximum of 5s. in the £ on earned income exceeding £2500 and unearned income exceeding £2000. Excess Profits Duty was raised from 50 per cent to 60 per cent. The estimated yield for the year of the increases in taxation was £73 millions. In this year the amount required for debt services rose to £125 millions. £1323 millions were to be found by borrowing. The addition to debt in the year was £1870 millions.

By 1917-18 Mr. Asquith's Government had been replaced by that of Mr. Lloyd George, and Mr. Bonar Law, who had succeeded Mr. M'Kenna as Chancellor, had to provide £2290½ millions. Votes of Credit reached the figure of £1975 millions. Revenue on the existing basis was expected to amount to £612½ millions. Increases were made in the duty on tobacco and in the Entertainments Duty. The rate of Excess Profits Duty was increased from 60 per cent to 80 per cent. The increase in the Tobacco Duty was expected to bring in £6,000,000; Entertainments Duty an additional million, and Excess Profits Duty a further £20,000,000—a total of £27,000,000. Against this there was an extension of the rebate in connection with the higher Licence Duties costing £1,000,000. It was necessary to borrow £1651½ millions. The addition to debt, which reached £5870 millions in the year, was £1860 millions. Debt services required £211 millions.

In the following year 1918-19 the peak of the national expenditure was reached. Mr. Bonar Law had to find £2972 millions. Revenue on the existing basis was put at £774¼ millions. Votes of Credit amounted to £2550 millions. The duty on spirits was doubled, as was the duty on beer. Increases were made in the duty on tobacco. The Sugar Duty was raised from 1½d.

a lb. to 2¾d. a lb. An increase was made in the Match Duty. Income Tax was raised from 5s. to 6s., and increases were made in Super-Tax, the limit being lowered to £2500. Some relief was granted to the taxpayer by a concession allowing him to pay Income Tax, Schedule A, by instalments. The 1d. Stamp Duty on Bills of Exchange and cheques was raised to 2d. These increases were expected to yield in this year £68 millions, and in a full year £114 millions. Further, the postage on the 1d. letter was raised to 1½d. and on the ½d. postcard to 1d. The yield of taxation was estimated at £842 millions, leaving £2130 millions to be provided by borrowing. Debt services required £268 millions. £1563 millions were added to the debt, which reached £7434 millions by the end of the year.

The war came to an end on the 11th November 1918.

The total issues from the Exchequer from 1st April 1914 to 31st March 1919 were £9,590,000,000. The money was raised approximately as follows:

From direct taxation	£1,820,000,000
From indirect taxation and other sources of revenue	£910,000,000
By borrowing at home	£5,500,000,000
By borrowing abroad	£1,360,000,000

In 1919-20 Mr. Austen Chamberlain had succeeded Mr. Bonar Law, who had been compelled by ill-health to retire. He had to provide £1435 millions. The Votes of Credit disappeared and there was borne on the estimates, which were consequently quite abnormal, the whole of the charges for remanent war expenditure. Revenue on the existing basis was put at £1159½ millions, including £200 millions from the proceeds of the sale of assets not appropriated in aid of votes. The deficit was therefore £275 millions. The duty on spirits was raised from 30s. to 50s. per proof gallon, and an increase was made in the duty on wine. Beer duty was raised from 50s. to 60s. per bulk barrel. In this year Imperial preference was established in pursuance of a declaration made two years previously by the Imperial War Conference. A preference of ⅓ was given as regards the articles subject to the M'Kenna Duties and of ⅛ on the articles subject to revenue duties pure and simple; the most important articles concerned were tea, cocoa, sugar and rum at an estimated cost of £3 millions in a full year. There were increases in the duty on estates over £1500, but the Excess Profits Duty was reduced to 40 per cent as from January 1919. The additional taxation imposed was expected to produce £41 millions in the year, £109 millions in a full year. The total estimated revenue was therefore £1201 millions, leaving £234 millions to be covered by borrowing. Debt services required £360 millions. The addition to debt in the year was £397 millions. In October the Chancellor, without introducing a new budget, presented revised estimates showing increased expenditure of £191 millions and decreased revenue of £32½ millions, making the deficit to be covered by borrowing, £473½ millions. This was the last year of Government borrowing of new money.

In 1920-21 there was a small decrease in the national expenditure, the amount required being £1418¼ millions, of which £234 millions were set aside for debt reduction. Debt services amounted to £320½ millions. Revenue on the existing basis was put at £1341½ millions, including £320 millions from sale of assets. There was further increase in the duty on spirits, which was raised from 50s. to 72s. 6d. The duty on beer became £5 a barrel. The duties on wines and imported cigars were increased. There were some alterations in the motor vehicle duties. Excess Profits Duty was raised from 40 per cent to 60 per cent and a new tax, called Corporation Profit Tax, of 1s. in the £ on the profits of Limited Liability Companies was imposed. Stamp duty on share capital was increased from 5s. to 20s., and the stamp on marketable securities doubled. The Post Office were faced with a deficit of £11,000,000 on the year's working. The service had in fact become, owing to increased cost of handling the business, a subsidised service. The charges, therefore, were increased. The 1½d. letter became a 2d. letter and telephone charges were rearranged. Land value duties were repealed. The increases were expected to produce £76½ millions in the current year and £198¼ millions in a full year. Effect was in this year given to certain recommendations of the Royal Commission on Income Tax as to family reliefs and double income tax at a cost of £5 millions in the current and £20 millions in a full year. Debt, which was £7831 millions, the highest recorded, at the beginning of the year, was decreased by £246 millions.

In 1921-22 Mr. Austen Chamberlain again presented the budget, though he had in fact been succeeded shortly before its introduction by Sir R. Horne. He required £1058 millions, in which figure was included a surplus of £84 millions. He allowed Excess Profits Duty to lapse, but otherwise there was no change in taxation.

In 1922-23 Sir Robert Horne anticipated expenditure of £910 millions, including £25 millions for supplementary estimates. Revenue on the existing basis was estimated at £956½ millions, and the Chancellor thus found himself with a surplus of £46½ millions. He took 4d. off tea at a cost of £5 millions; 1s. off Income Tax, which cost £32½ millions in this year and £52 millions in a full year; the letter rate was reduced to 1½d. and the postcard to 1d., and some concessions were made to telephone

users at a cost of some £5½ millions. This year ended with a surplus of no less than £101½ millions.

In October 1922 the Coalition Government came to an end.

In 1923-24 Mr. Baldwin budgeted for £818½ millions. In the preceding January the agreement for funding the American debt had been arrived at with the government of the United States of America. The debt, including the capitalised arrears of interest on the American debt, was £7772 millions. The Chancellor established the new Sinking Fund (1923) by which a provision was made for £40 millions in this year for debt redemption, rising to £45 millions in the following, and to £50 millions in subsequent years. Debt charges including the new Sinking Fund were £850 millions.

Revenue on the existing basis showed a surplus of £36 millions, which was employed as follows:

The Chancellor gave a rebate of £1 per barrel on beer at a cost of £13 millions in the current and £16½ millions in a full year. He repealed the small duty on cider, and made a reduction in the Table Water Duty. He reduced Income Tax from 5s. to 4s. 6d. at a cost of £19 millions in the current and £26 millions in a full year; Corporation Profits Tax from 1s. to 6d. at a cost of £2 millions in the current and £12½ millions in a full year. He also made some reductions amounting in a full year to £2½ millions in postal charges. A betting tax was discussed and referred to a Select Committee. The size of the surplus, which had, of course, been used in debt redemption, and the Chancellor's proposals for the new Sinking Fund gave rise to a discussion as to the relative merits of debt and tax reduction from the point of view of the encouragement of trade. The claim of tax reduction against debt reduction was urged by a section of the Liberal Party and found some adherents amongst the Chancellor's own supporters. The Chancellor's proposals were, however, criticised by the Labour Party on the ground of the insufficiency of the amount set aside for debt redemption, and he had no difficulty in carrying his plan. The main demand of the opposition was for a reduction of the Sugar Duty. The Chancellor resisted it successfully on the ground that owing to the state of production any reduction would benefit the producer and not the consumer.

In the autumn of 1923 Mr. Baldwin, who had become Prime Minister in the preceding May, went to the country on Protection and resigned in January 1924, on finding himself without an absolute majority over the other two parties. 1924-25 saw the first Labour Budget. Mr. Snowden wanted £794 millions, including a £4 millions surplus. He found himself with £38 millions to dispose of. He took 4d. a lb. off tea, with the consequential reductions on coffee, cocoa, etc., thus bringing the duty below the pre-war level, at a cost in a full year of £5½ millions. He took 1½d. off sugar, at a cost in a full year of £18½ millions. He swept away the duty on dried fruits. He abolished the Entertainments Duty on seats costing less than 6d., making a reduction in the duty on seats between 6d. and 1s. at a cost of £4 millions in a full year. Less important financially, but of greater political importance, was the abolition of the M'Kenna duties. He made some small concessions on motor vehicle duties. He removed the remaining 6d. of Corporation Profits Tax and repealed the Inhabited House Duty (£2 millions). Finally, he made some further concessions to telephone users. His proposals raised some discussion as to the proportion which should be borne by direct to indirect taxation, a question to which much attention had been given in the last decades of the previous century. Mr. Asquith's opinion, however, that the difficulty of determining the ultimate incidence of a tax and other considerations which had since emerged had deprived the subject of much of its importance, found general acceptance. The main criticism was directed to the abolition of the M'Kenna duties, which was strongly opposed by the Conservative Party on the ground of its effect upon unemployment, and the absence of proposals for increases in Imperial preferences which the late Government had agreed at the Imperial Conference in the preceding autumn to place before Parliament.

H. E. F.

BUILDING SOCIETIES.* The Reports of Mr. G. S. Robertson, K.C., the Chief Registrar of Friendly Societies, on the returns of Building Societies for the year 1921, furnish the latest available information relating to those societies. From those returns inferences may be drawn as to the effect of the war on the prosperity of the societies, and the public service they are capable of rendering in meeting the shortage of building which was one of the consequences of the war. For this purpose, the returns of 1913 (pre-war), 1917 (war), and 1921 (post-war) may conveniently be compared. These were furnished by 1610, 1418, 1225 societies respectively, showing that the diminution in the number of societies (due in the main to the terminating societies coming to their natural end) still continues. The number of members was 625,523 : 620,607 : and 789,052 in the three years referred to ; the total amounts received by the societies were respectively £23,391,672, £22,288,050, and £47,146,705. The amount advanced to members was (in 1913) £9,244,570, (in 1917) £4,555,984. (in 1921) £19,673,408. The liabilities and assets were as follow:

	1913.	1917.	1921.
Liabilities—	£	£	£
To Shareholders	46,232,642	47,188,470	70,861,612
To Depositors and other Creditors	16,192,482	13,812,207	19,072,003
Net Balance undivided . .	3,882,709	4,260,191	5,331,659
	66,307,833	65,255,868	95,265,274
Assets—			
Mortgages . .	61,639,132	55,249,802	75,503,123
Other Assets .	4,668,701	10,006,066	19,762,151
	66,307,833	65,255,868	95,265,274

From these figures, it appears that the effects of the war upon Building Societies, though noticeable, were much less than might have been expected. The shareholders managed to keep up their payments. The amounts withdrawn by depositors were soon replaced. The profits were maintained. Though the fresh advances on mortgage were comparatively few, the "other assets," which were probably mainly patriotic investments in the securities created by Government to meet the expenses of the war, were largely increased. Some other interesting points may be inferred from the following analysis of the mortgage assets at the three years in question :

Mortgages.	1913.	1917.	1921.
	Per cent.	Per cent.	Per cent.
Under £1000 . . .	71·0	73·8	79·0
£1000 and over . .	24·2	22·7	20·2
Properties in possession and in arrear over 12 months . . .	4·8	3·5	0·8
	100·0	100·0	100·0

When the great increase in the cost of house property of late years is taken into account, it will appear that the business of Building Societies has been principally among the holders of small properties, and that its tendency has reverted to their original purpose of helping the small investor to acquire his dwelling-house. The most satisfactory feature in the returns is the diminution in the item of properties in possession or in arrear for more than 12 months. In 1896 they amounted to £6,322,172, or 14·6 per cent of the then mortgage assets; in 1921 they are only £529,264, or less than 1 per cent; the steady diminution during the whole period having been due to good management.

The Building Societies Association, which has been established fifty-five years, has been of great service to the societies in promoting amendments of the law, and in watching over the interests of the societies when legislation that may be prejudicial to them has been proposed in other quarters. The late Lord Avebury was its president for many years, and is now succeeded in that office by Lord Emmott. At the annual meeting of the Association held at York in 1923, a report was presented on the Housing problem, containing the recommendations of the Committee of the Association for dealing with it. These have for object the restoration of public confidence in house property as an investment, the inducing and assisting investors and purchasers for occupation to meet the shortage, and the provision of funds for the erection of suitable dwellings on approved sites. The Committee recommended that house property should be relieved of some of the burdens which now press heavily upon it, and that in any scheme for organised or assisted house building, the machinery of Building Societies should be utilised. The facts above given as to the success which has attended these voluntary and self-supporting bodies in accumulating a vast sum by the subscriptions of their members, in assisting them to purchase their own dwellings, in meeting the strain of war with so little difficulty, in repairing its damage so expeditiously, and in strengthening their position, should establish a claim on their part, not merely to be consulted, but to be looked upon as necessary agents in the carrying out of any measures for providing suitable dwelling-houses for a growing population. E. W. B.

BUREAU OF LABOUR.* See also LABOUR DEPARTMENT, LABOUR EXCHANGES, in Vol. II., and UNEMPLOYED, Appendix, Vol. III.

BUREAU OF LABOUR IN THE UNITED STATES.* In some states functions pertaining to labour information similar to those described in the original article were assigned at first to other state officials—as to a commissioner or secretary of agriculture, education, or industry—and gradually in every state some sort of labour authority was created. Since 1910, with the growth of factory legislation, factory inspection, and more particularly workmen's compensation laws, other functions, such as factory inspection, in some cases mine inspection (though usually kept in separate bureaus), and administrative duties of various kinds, also in many cases powers of mediation, conciliation, and arbitration in industrial disputes, have been added or combined with the statistical and information services of the various state labour bureaus. More recently, and notably in Wisconsin, New York, Pennsylvania, Ohio, Oregon, and Washington, state industrial commissions, with quasi-legislative (rule-making power), judicial, and administrative powers, have been created, in which all of these functions are combined and the older type of labour bureau incorporated.

The industrial commissions and the labour bureaus in the larger industrial states are usually provided with large appropriations and

with extensive legal powers, and the scientific value of their reports and of special investigations made from time to time under their direction or with their co-operation is very considerable. The three Reports (10 vols.) of the New York Factory Investigating Commission (1913-16) is an illustration.

The early work and reports of most of the bureaus (Mass. is an exception), and even to date those of many bureaus in the less important industrial states, are inconsequential. Such bureaus have meagre financial resources and few legal powers, but they will develop in time along the lines laid down by the larger and stronger organisations of a similar character.

The national bureau of labour statistics is better equipped than any of the state bureaus. It is now an important division of the Federal Department of Labour, established by act of 4th March 1913, under the direction of a Secretary of Labour, who is a full cabinet officer. The Department of Labour is the successor, as far as labour functions are concerned, to the former Department of Commerce and Labour, now the Department of Commerce, established by act of 14th February 1903, but with much enlarged resources, powers, and duties, including important administrative functions with respect to immigration and many matters pertaining to the welfare of wage earners.

The present bureau of labour statistics has therefore successively had the titles of Bureau of Labour, Department of the Interior, Department of Labour, without the status of an executive department; Bureau of Labour, Department of Commerce and Labour, and Bureau of Labour Statistics, Department of Labour. Throughout its history since 1885 it has done valuable work, and its voluminous publications constitute the most complete and authoritative source of information we have on labour conditions in the United States. It has published many valuable reports, including twenty-five Annual Reports, discontinued in 1910 (1886-1910), such as that on Industrial Depressions (1886), Convict Labour (1886 and 1905), Strikes and Lock-outs (1887, for the period 1881-86; 1894, for period 1887-94; 1901, for period 1881-1900; 1906, for period 1901-1905), Cost of Production (1890 and 1891), Cost of Living (1903), Industrial Education (1910); twelve Special Reports, discontinued in 1905, such as Marriage and Divorce (1889), Housing of Working People (1895), Labour Laws of the United States (1904); Miscellaneous Reports, most of which now appear in a series of bi-monthly bulletins —No. 1, Nov. 1895, to date (No. 319, Oct. 1922, entitled Bureau of Labour Statistics, U.S. Department of Labour, its history, activities, and organisation, contains a complete chronological list of publications of the bureau). The most important of the Miscellaneous Reports, made under special appropriation and authorisation of Congress, is that on Condition of Woman and Child Wage-earners in the United States (1910-12, 19 vols.), and next that on Conditions of Employment in the Iron and Steel Industry in the United States (1911, 4 vols.).

Since 1915 the bureau has published *The Monthly Labour Review*, giving information concerning the current work and publications of the bureau and of other agencies of the federal and state governments, and of foreign countries, which relate to labour matters; also information from other sources having a bearing upon labour in all parts of the world. A cumulative index of *The Monthly Labour Review*—July 1915 to December 1920—was published by the bureau (1923), and a subject index of the publications of the bureau up to 1st May 1915 (Washington, 1915; 233 pp.).

[Reports of the various bureaus (generally annual, in some cases biennial).—Proceedings of convention of the chiefs of labour bureaus (annually since 1883).—*Political Science Quarterly*, vol. i. 1886, pp. 45 *seq.* and 438 *seq.*] S. M. L.

BUTT, Isaac (1813-79), born at Glenfin, Donegal, scholar of Trinity College, Dublin, during his collegiate course showed great ability in classical studies. He succeeded M. Longfield as Whately professor of Political Economy at Dublin 1836-41, and accepted his predecessor's conclusions on the productivity theory of wages and the marginal productivity theory of interest in economic science. (See Longfield, Vol. II. and Appendix.)

Butt repeated and developed the doctrine in a monograph entitled *Rent, Profit, and Labour*. Professor Seligman tells us that the theory of marginal productivity as applied to capital and labour "seems obvious and simple enough, but until the appearance of Dr. Longfield's letters it was not thought of." Butt was called to the Irish Bar in 1838, and to the English Bar, Inner Temple, in 1859. Of his ability and brilliancy as an advocate, or of his association with politics and his parliamentary career, we cannot speak at any length here. He is stated to have been the first to have used Home Rule as an effective election cry, and to have been probably the inventor of the phrase. Latterly he found himself unable to manage the party he had created. The treatment he received almost broke his heart.

Butt wrote—*Rent, Profits, and Labour: A Lecture delivered before the University of Dublin in Michaelmas Term, 1837* (Dublin, 1838), and a larger *Introductory Lecture delivered before the University of Dublin in Hilary Term 1837*, Dublin, 1837. In this he follows Say in defining production as the "creation of utility," rather than the "creation of value," and is especially severe on those economists who wish to limit the term wealth to material objects Immaterial, like material,

objects are equally forms of wealth. He also objects to identifying capital with the instruments of production. His writings on other subjects are numerous and able.

[Prof. E. R. A. Seligman—"On some Neglected British Economists," in the *Economic Journal*, London, 1903.—*The Dictionary of National Biography*.]

CAIRD, Sir James (1816-1892), was born at Stranraer and educated at the high school at Edinburgh. He went to the University, but left after a short time in order to learn farming in Northumberland. In 1841 he took a farm near Wigtown. His first important work was published in connection with the repeal of the Corn Laws and the Free Trade controversy. The reputation he gained by championing the cause of free trade in his *High Farming as the Best Substitute for Protection* caused him to be appointed by the Government to visit the South and West of Ireland and to make a report on the country. This report, which took an optimistic view of Irish agriculture, was published in an expanded form in 1850 as *The Plantation Scheme, or the West of Ireland as a Field for Investment*. In 1850 *The Times* instituted an investigation into the effects of free trade on the economic difficulties of British farmers. Caird, who was appointed principal commissioner in this investigation, wrote letters during the year 1850 giving a survey of agriculture. These letters were published in 1852 under the title *English Agriculture in* 1850-51. At the General Election of 1852 Caird stood as a Liberal for Wigtown, and was defeated; but he was returned at the General Election of 1857 as member for Dartmouth. In 1857 he introduced a Bill to make provision for the collection of agricultural statistics in England and Wales, but his proposal did not meet with success until 1864. In 1858 he travelled to America and visited Canada and the United States. On his return he published the result of his experiences in a work entitled *Prairie Farming in America, with Notes by the Way on Canada and the United States*. In 1859 he stood for Stirling as a Liberal and was returned unopposed. In the following year he was appointed a member of the Fishery Board. In 1863 he was made chairman of the Royal Commission appointed to investigate the condition of the sea fisheries in the United Kingdom, and in this capacity inspected some of the principal fishing centres. At the same time he made the acquaintance of John Bright through his motion for the appointment of a committee to investigate the possibility of securing an additional supply of cotton from India. On the failure of his motion he travelled to Algeria, Italy, and Sicily in order to study the problem of the supply of cotton. In 1865 he received appointment as Enclosure Commissioner and withdrew from Parliament. As a result of a second visit to Ireland in 1869 he published a pamphlet entitled *The Irish Land Question*. In 1875 he was elected a Fellow of the Royal Society. On the appointment of a commission to investigate the causes of the Indian famine of 1876-7, Caird, who was nominated as a member, visited India, and after his return published his views in *India, the Land and the People*. In 1880 he became president of the Statistical Society, and in 1881 was re-elected. In the following year he became a member of the newly appointed Land Commission. In 1886 he was appointed to serve on the commission formed to investigate the agricultural situation in Ireland. In the Board of Agriculture, constituted in 1889, he became director of the Land Department, and was made at the same time Privy Councillor. He abandoned his post in the Board of Agriculture in 1891.

Caird published—*High Farming as the Best Substitute for Protection* (Edinburgh, 1849); *English Agriculture in 1850-51* (London, 1851); *Prairie Farming in America* (London, 1859); *The Plantation Scheme, or the West of Ireland as a Field for Investment* (London, 1850); *Our Daily Food, its Price and Sources of Supply* (London, 1868); *The Irish Land Question* (London, 1869); *The Landed Interest and the Supply of Food* (London, 1878); *The British Land Question* (London, 1881); *India, the Land and the People* (London, 1883).

E. L. H.

CANALS.* The policy of development of inland water transport was revived in 1905, when a Bill was introduced into Parliament with the intention that the State should take over and control the chief waterways of the country. As a result of the agitation that arose, a Royal Commission was appointed in 1906 and instructed to consider (1) The existing condition of the canals of the country, (2) The causes hindering the carrying out of improvements, (3) The improvements required in order to complete a thorough system of communication between the principal centres, (4) The prospect of benefit to the trade of the country compatible with a reasonable return on the probable cost, (5) The expediency of canals being made or acquired by public bodies or trusts. The fourth and final report of the Commission was issued in 1910. It recommended the appointment of a Central Waterway Board for Great Britain, the unification of the existing waterways and their transference to the administration of the proposed Board. The financial recommendations were based on the methods already adopted

under the Port of London Act (1908). Stock would be issued by the Waterway Board to the various canal companies for the purpose of acquiring their properties. It was also held that some form of financial assistance should be provided by the State in order to bring about the restoration of the canal system. So far as practical improvements were concerned, it was suggested that the four main routes connecting the Midland district with the Thames, Mersey, Humber and Severn ("The Cross") should be amalgamated and brought into working order. No steps were taken, however, to carry out the recommendations made in this report. It was felt in many quarters that the scheme proposed was a vain attempt to resuscitate a dying system of transport and would probably involve the State in a serious financial loss. These objections were applicable alike to nationalisation, municipalisation, or a system of public trusts.

On 1st March 1917 the Government took over the control of the chief independent canals, and a Canal Control Committee was formed. Under this scheme the canal companies were guaranteed the net revenue they earned in a standard year (usually 1913). In 1920, when State control ceased, a Committee was appointed under the presidency of Mr. Neville Chamberlain to review the situation. This Committee was instructed to consider whether any portions of the canal system of the country should be acquired by the Ministry of Transport with a view to their improvement. If acquisition were recommended, it had also to report whether the acquired portions should be owned by the State, by a regional Trust, or in some other form ; and by what means improvements should be carried out in these portions. The Committee recommended the grouping of the canals on the lines of the grouping of the railway system, and the formation of public trusts aided partly by the State, partly by local authorities. Reservations were made by Sir W. Acworth, who pointed out the unremunerative nature of the vast improvements made on the Erie Canal. It was generally recognised that the economic working of the canal system, as a means of transport over long distances, was not possible, and that its restoration would necessitate State assistance on a large scale. The recommendations of the Committee have therefore shared the fate of those of the Commission of 1906-10.

E. L. H.

CENSUS.* The demands for the improvement of the Census which, as mentioned in the earlier article, had been repeatedly urged are now receiving attention. Some progress in the co-ordination of imperial statistics was made by the Imperial Statistical Congress which met in London, 1920. The quinquennial census has at length been instituted, or at least made possible. By the Census Act of 1920 His Majesty in council may direct from time to time that a census shall be taken for Great Britain, or any part of it, but not unless at least five years have elapsed since the commencement of the year in which a census was last taken. There is probably a certain connection between the introduction of the quinquennial census and another innovation, the omission of an enquiry that had been introduced into a former census. The enquiry as to duration of existing marriages and the number of children born of such marriages prescribed in 1911 has been omitted in 1921. It may be thought sufficient to ask this question every ten years, thus making room for other pressing questions to be asked from time to time.

The new arrangements can better be studied after the publication of the "General Report." Meanwhile some leading facts stated in the Preliminary Report may be noticed. The birth-rate in the period 1915-18 was lower by some 20 to 25 per cent than what normally might have been expected. The increase of population in England and Wales was less in absolute number than the increase in any other intercensal period since 1811. The increase per cent of the population was very much less than ever before. Besides the diminution of births—more than a million fewer than during the period 1901-1911—there was an immense increase in the category "loss due to excess of outward over inward migration." For the number of the outward bound was swollen by the deaths of non-civilians belonging to England and Wales which occurred outside the United Kingdom. These "unreturned brave" numbered about 560,000. The loss of so many men has aggravated the disproportion between the sexes. Whereas the excess of females was in 1911 in round numbers 1,180,000, it was in 1921 1,720,000. The ratio of females to 1000 males which was in 1911 1008 had become 1095 in 1921. There is some contrast in respect of these features between the country as a whole and the several subdivisions. The census of Scotland and that of Ireland will no doubt also present contrasts.

[See Bowley, "Births and Population in Great Britain," *Economic Journal*, June 1924.]

F. Y. E.

CENSUS OF PRODUCTION. During the nineteenth century the census in this country was confined to a decennial enumeration of the population, and did not attempt such comprehensive collections of industrial statistics as were regularly included in the census of the United States and our principal overseas dominions. In 1906 the Census of Production Act empowered the Board of Trade to make a census of production. The statistics of agriculture and of mining annually published by

the Board of Agriculture and the Home Office were deemed to be sufficient, and these industries were excluded from the operation of the Act. In 1908 a census relating to 1907 was taken, and in 1911 the repetition of the enquiry was authorised for each succeeding fifth year. Material was gathered for 1912, but before this could be completely examined and checked the outbreak of war caused the work to be abandoned, and the results have been considered too imperfect for publication. The Census of Production Act, 1917, provides that "it shall not be necessary to have a fixed interval between any census of production under the principal Act and another such census, and such a census shall be taken in any year which is fixed for the purpose by an order made by the Board of Trade and laid before Parliament; and, if the order so directs, may be limited to any trades or businesses mentioned in the order—provided that there is at least a year's interval between the date on which the order is made by the Board of Trade and the commencement of the year in which the census is to be taken." Preparations were made for a census for 1920, but on grounds of economy the enquiry was countermanded. It was announced that a census relating to 1922 was to be taken, but this enquiry was abandoned at an early stage, and it was ultimately decided to take a census relating to 1924.

The difficulty of ensuring an accurate Census of Production is very great. The reluctance of producers and traders to give full and clear information as to their businesses has to be surmounted, and the utmost vigilance is needed to avoid counting over and over again the value of the constituent portions of many productions. For example, in textile manufactures, if the spinning and weaving industries are separated, the yarn is counted twice; if the wool is produced in the same country, and the census include agriculture, it is valued three times. For these difficulties see the article by Mr. G. Udny Yule in the *Journal of the Royal Statistical Society* for March 1907.

As to the Census of Production in other countries, see A. W. Flux, *Journal of the Royal Statistical Society*, May 1924. H. H.

CERNUSCHI, Henri (1821-1896), born at Milan, is principally known by his writings on finance, and as a strong adherent of bimetallism, holding that the ratio should stand unalterably at 15½, notwithstanding variations in the market price of silver. He is regarded as the originator of the term "Bimetallism." He was educated for the legal profession, but his studies were interrupted by the revolutionary movement of 1848, in which he took part. He sat in the National Assembly at Rome in 1849-50, till the revolutionary government fell, when he escaped to Paris. There, naturalized as a French subject, he made a considerable fortune in banking, and took a strong interest in politics. He opposed the Socialist movement, and especially the *plebiscite* of 1870, spending large sums of money in doing this, as well as in putting into practice his theories of co-operation.

He wrote: *Mécanique de l'échange*, 1865.—*Illusion des Sociétés Co-opératives*, 1866.—*Or et argent*, 1874.—*La Monnaie bimétallique*, 1876.—*Le Bimétallisme en Angleterre*, 1879.—*Le Bimétallisme à quinze et demi nécessaire*, 1881.—*Le Grand Procès de l'Union Latine*, 1884.

CHILDREN'S EMPLOYMENT. In this country children (who, for our purpose, are defined as persons under fourteen years of age) have for many years (see Children's Labour) been engaged in a large number of occupations outside the home. As the public conscience grew in regard to responsibility for the welfare of children, the community took more and more power to itself to regulate their employment; and there are now very few cases in which the State or the municipality cannot or does not make regulations for the good of the child.

Forms of employment are:

Industrial Employment. The half-time system of employment in factories and workshops remained on the statute-book from 1833 till 1920. Those who condemn the system should not forget that the half-time clauses in the various Factory Acts constituted, in fact, the only effective system of compulsory education existing before 1870. With the coming of universal compulsory education, however, the system ceased to operate beneficially; gradually many local authorities made bye-laws (under the Education Acts) directed against it, and an Inter-Departmental Committee reported in 1909 in favour of its abolition by law. Even before this the system was practically confined to the textile districts of Lancashire and Yorkshire, but public opinion in these areas favoured its continuance. It was not until after the war that this public opinion was found to have melted away; that it had done so was shown by the fact that the coming into force of the Employment of Women, Young Persons and Children Act, 1920, which abolished the system, was attended by very little friction. This Act was passed to give effect to the Draft Convention adopted by the first Conference of the International Labour Organisation of the League of Nations, held at Washington in 1919. It prohibited the employment of any child under the age of fourteen years in any "industrial undertaking," the definition of which covers (as in the Draft Convention) factories, workshops, mines and quarries, together with constructional work, and rail or road transport. The Act had the immediate effect of

raising the minimum age at which children might be industrially employed. In factories and workshops, not only did it abolish the half-time system, but it swept away all possibility of full-time employment at thirteen years, hitherto legal, under certain circumstances, for children who had gained specified educational certificates. It had a similar effect on the employment of boys of thirteen years in mines and quarries, which up to this date had been governed by the Mines Acts alone. Before leaving industrial employment, mention must be made of the Employment of Children Act, 1903. This Act contained certain general restrictions operative in industrial as well as other employments, and its clauses included regulations as to the carrying of heavy weights, and prohibition of employment in any occupation likely to be injurious to life, limb, health, or education. This Act was repealed by the Education Act, 1921, which, however, re-enacted all its provisions.

Employment in and on the Business of Shops. Children's employment is not specially dealt with in the Shops' Acts, 1912-13, the weekly limit of hours in and about a shop, for all young persons under eighteen years, being seventy-four hours weekly, including meal times. Children's hours are, however, governed by the Education Act, 1921 (superseding the Employment of Children Act, 1903), which lays down certain regulations in regard to employment generally. Moreover, local education authorities are given power to make more stringent rules (including prohibition of employment) by bye-law, with respect to all occupations or to any specified occupation other than industrial. Thus work in or about shops, newspaper or milk delivering, and the running of errands generally, can be regulated according to the circumstances of the locality and the zeal of the local education authority. An increasing number of authorities are adopting such bye-laws, which are required to be framed on certain lines and to be confirmed by the Home Secretary.

Street Trading. This was defined by the Employment of Children Act, 1903, to include the hawking of newspapers, matches, flowers and other articles, playing, singing or performing for profit, shoeblacking or any other like occupation carried on in streets or public places. This Act was the first to regulate street trading; it laid down a minimum age of 11 years below which no child might be employed, and it gave power to local authorities to make bye-laws with respect to street traders between that age and 16 years. The Education Act, 1921, raised the minimum age to 14 years and confirmed the power of the local authorities to make bye-laws in the case of persons between 14 and 16 years.

Employment in Public Entertainments. The legislation on this subject is now contained in the Education Act, 1921. It enacts (1) that no child under 12 years may be employed on the stage; (2) that children between 12 and 14 years may be so employed without a licence up to 8 P.M., or such time as may be fixed by bye-law; (3) that children between 12 and 14 years may be so employed up to any hour, if they hold a licence from a local education authority. Such licences can only be issued if the authority is satisfied that proper provision has been made to secure the health and kind treatment of the child, and are subject to conditions laid down by the Board of Education. Exemption from these regulations is allowed under certain circumstances in the case of charitable entertainments not held on licensed premises. Laws also exist to deal with the employment of children in dangerous performances, *e.g.* as acrobats and circus performers. In addition to earlier Acts, the Education Act, 1921, governs both employment and training.

Legislation abroad on the employment of children has been stimulated by the International Labour Conferences; ten States (including Belgium, Denmark, and Switzerland) have ratified the Draft Convention in regard to industrial employment, and thirteen more have recommended ratification. An important step towards the further regulation of child labour in the U.S.A. is represented by the Child Labour Amendment to the Constitution recently adopted by the Senate. Should the necessary number of States ratify the amendment in their several legislatures, Congress will have power to limit, regulate, and prohibit the labour of persons under 18 years, a power which at present belongs only to individual States.

H. C. E.

CLAMAGERAN, JEAN JULES (1827-1904). Although born in New Orleans, he was in 1850 admitted as a member of the Parisian bar, and later on made himself known as an opponent of the Imperial Government and an adherent of republican opinions. During the siege of Paris in 1870-1871 he superintended the service of public subsistence as *adjoint* (deputy) of the *Maire* of Paris. In 1879 he was appointed a councillor of state, and in 1882 he was elected a life senator.

Clamageran has largely contributed to periodical publications on questions of the day, both juridical, economical, and even religious (he was a Protestant). In 1873 he published a volume of constitutional, economic, and administrative essays under the title *La France républicaine*, and in 1874 another entitled *L'Algérie, impressions de voyage, avec une étude sur la Colonisation*, but his main claim to be remembered as an economist is his great history of taxation: *Histoire de l'impôt en France*, 3 vols., 1867-1868 and 1876. It is the only extant general work on the subject, beginning

with Roman Gaul, and ending at the accession of Lewis XVI. It is full of detailed and extensive information, and although no trained mediæval scholar, the author leads the reader safely through the maze of mediæval financial policy. His last volume, devoted to the last century of the *Ancien régime* (1683-1774), acknowledges the improvement of French finance since the death of Lewis XIV., but concludes that monarchy, fallen into disrepute by the vile reign of Lewis XV., had lost the moral power necessary to bring the task of reform to a satisfactory close.

Immediately after his death his widow collected and issued a volume of *Études politiques, économiques et financières* (1904), amongst which should be mentioned a Study on French finance from 1814 to 1889. E. Ca.

CLEARING HOUSE, THE LONDON BANKERS'.* Little is known of the early history of the London Bankers' Clearing House. Tradition says that the clearing system had its origin in the daily meeting in their luncheon hour of certain bankers' clerks at a chop house, probably the Five Bells in Dove Court, Lombard Street, between St. Mary Woolnoth and Smith's Bank, where the clerks used to lunch and exchange the cheques they had upon each other's firms.

The convenience of the system was evident, and the meeting in the public room was officially recognised by the joint renting by the bankers of a room in the chop house.

In 1773 we find entries in bankers' books: "To quarterly charge for use of the clearing room, 19s. 6d."

The next step, probably taken about 1784, was the renting of a larger room at Mrs. Irving's, next door to the Five Bells. Complaints being made that the room was too small, the first floor was taken out to make the light better and the room cooler.

In 1800 there were forty-three banks in the Clearing House, and some five years later a larger room was taken next to Messrs. Smith Paynes, and two inspectors were appointed, Mr. Thomas and Mr. White, the wine merchant of Lime Street.

In 1810 Mr. Thomas stated in his evidence before the Bullion Committee, that there were forty-six banks in the Clearing House, and that the average amount cleared was £4,700,000 daily, or on Stock Exchange settling days about £14,000,000, but it seems probable that the amounts quoted were for both sides, received and paid.

In early days the differences were paid by bank notes and gold, but later only notes of £50 and upwards were used, the balance in excess of the last £50 being carried forward to the next day's account. In 1839 the average amount of bank notes thus used was £213,100, the largest amount used in one day being £593,300, the smallest £108,000.

In 1829, when the house became too small and was rebuilt, there were thirty-nine banks clearing. By 1841 these had been reduced to twenty-nine. Until 1854 the private banks alone shared the control of the Clearing House, and refused with scorn the repeated applications for admission made by the joint-stock banks, which had come into existence after 1833, and were regarded as scarcely respectable by the private banks. By 1854, however, it had become obvious that the joint-stock banks had come to stay, and would, if perpetually repulsed from the Clearing House, start a Clearing House of their own, and in that year the following joint-stock banks were admitted, London and Westminster (founded 1834), London Joint-Stock Bank (1836), Union Bank of London (1839), London and County Bank (1839), Commercial Bank of London (1840), followed shortly afterwards by others, most of whom were admitted on amalgamation with a private clearing bank.

Another important change took place in this year 1854, for on 11th May the system of paying the balance due to or from the Clearing House in bank notes ceased, and the accounts have since been settled by cheque on the Bank of England, with which it is essential that each of the clearing banks should have an account. In 1858, as a countermove to the Country Bankers, who were proposing a separate Clearing, the Country Clearing was established on the lines of a scheme proposed by Mr. John Lubbock, afterwards Lord Avebury, with the result that country cheques, being henceforth easily collected, took the place of notes and bankers' drafts, and became part of the currency system of the country, thus effecting an enormous saving in the use of notes and coin.

In 1864 the Bank of England entered the Clearing House, to clear on one side only, the outside, for while the bank presents to the clearing bankers at the Clearing House all cheques payable by them, all cheques and bills drawn on the bank are presented by the clearing bankers direct to the bank. Owing to the amalgamations of recent years there are now (1924) only ten Clearing Banks besides the Bank of England.

The totals for the years of the paid clearing were:—

1839	£954,401,000
1868	3,425,185,000
1893	6,478,013,000
1903	10,119,825,000
1913	16,436,404,000
1923	36,627,592,000

Until 1901 the total for the year was given without subdivision into Town and Country, but in 1902 the Town and Country totals were separated, and in 1907 when the Metropolitan Clearing was established a third division was made. The figures given above for 1903 and onwards are divided between these three clearings as follows:—

	Town.	Proportion to Total.	Metropolitan.	Proportion to Total.	Country.	Proportion to Total.
1903	£9,234,956,000	91·2	..	..	£884,869,000	8·7
1913	14,191,275,000	86·3	£855,648,000	5·2	1,389,481,000	8·4
1923	32,270,373,000	88·1	1,546,565,000	4·2	2,810,654,000	7·6

The highest yearly total was reached in 1920, viz.: £39,018,903,000. Up to date, August 1924, the highest turnover for any one day was reached on 30th June 1924, when the huge total of £247,914,000 was recorded. The £200,000,000 mark was passed for the first time on 30th April 1924, and has been exceeded on nineteen separate days since.

The average daily totals for the three clearings for the above-mentioned years were as follows:—

	1883.	1893.	1903.	1913.	1923.
Town	..	..	30,081,300	46,225,600	105,115,200
Metropolitan . . .	..	..	..	2,787,100	5,037,600
Country	..	..	2,882,300	4,526,100	9,155,200
	19,314,000	21,170,000	32,963,600	53,538,800	119,308,000

The Town Clearing total through which the chief monetary transactions pass, such as the subscriptions for new issues, and the daily loans and repayments of the money markets, must not be relied upon as an indication of the course of trade. The Metropolitan and Country figures, reflecting as they do the trade of the Metropolis and of the Country, are a much better guide to trade activity.

For many years the returns used to be divided into four groups, Stock Exchange Settling Days, Consol Settling Days, Fourths of the Month and Ordinary Days, but such division has ceased to accord with the monetary conditions of to-day, for there are no longer Consol Settling Days, and the Bill payments which used to be concentrated by certain trades on the fourths of each month are now spread generally, so these divisions are no longer made.

The number of drafts passing through the Clearing House is enormous, and it is impossible to keep an exact record of their precise number but in 1922 a census was taken on two occasions, and the average daily number was computed to be 550,000, a figure which is constantly increasing. Indeed, did the old conditions, when the figures of all cheques had to be taken down by hand, still obtain, the present Clearing House would be far too small for the staff of clerks that would be necessary. However, mechanical ingenuity has solved the difficulty, and by the aid of the Burroughs machine cheques are not only listed, but the amounts totalled at one operation, and all errors, save those caused by taking down the amount of a cheque wrongly, are eliminated.

In comparing the above figures with those of other Clearing Houses, it must be remembered that the Bank of England clears only on one side. Did it clear on both sides, the annual amount would be very largely increased.

The Clearing House is situated in Post Office Court, Lombard Street, with frontages to King William Street and Abchurch Lane. Of the building itself little need be said. It has few architectural features of its own, except for its handsome oak-panelled Committee Room, for it has grown mainly by the absorption of premises built for other purposes; but additions have been made from time to time, and it is now vastly larger than it was even twenty-five years ago. Except for three inspectors, who are responsible for order and the carrying out of the rules, the Clearing House is staffed by each constituent bank sending from its own staff the requisite number of clerks for its own work.

Desks are placed round the walls and in the centre of the rooms, a certain number being allotted to each bank, according to its requirements. The banks are arranged more or less in alphabetical order, and sufficient space is left between the central and wall desks to enable the clerks to pass round the room and deliver their charges as the bundles of cheques are called. These charges are then taken to be listed to the rooms where the adding machines are located, the working of the Clearing House having been greatly changed by the use of the Burroughs adding machines. For the working of the Clearing House each bank has, in principle, though modified by the use of the Burroughs machine, two special sets of books ruled in columns, in which the cheques are entered under the head of each of the clearing banks. One set of these books, the out-clearing books, are written up at the office; the other, the in-clearing books, at the Clearing House. It must be remembered that "out"

and "in" clearing are only relative terms, and that what is sent to the Clearing House by Bank A as out-clearing, becomes when delivered to B at the Clearing House the latter's in-clearing.

The first step in the clearing is the sorting, in the office of each bank, of the cheques drawn on the other clearing banks under the names of those banks. Each parcel of cheques so sorted is entered by the out-clearer in his books at the bank under the head of the paying bank. If the list is a long one casts are made at intervals, and the total of these casts recorded as a check to accuracy on the back of the last cheque of each cast, which is turned over to draw the attention of the receiving clerk at the Clearing House to the cast, so that he can agree as he completes each cast. From the bank a clerk takes the charges to the Clearing House, and delivers them at the desk of each paying bank. The process is now repeated. The paying bank's in-clearing clerk takes down the charges in his books, or on the type-written rolls of the Burroughs adding and listing machines, taking care to see that the casts agree, and the cheques when taken down are sent to the office of the paying bank for payment or return.

At the close of the clearing each bank sends down its out-clearing books to the Clearing House, in order that they may be agreed with the in-clearing books of the banks there.

If the totals do not agree the books are compared and mistakes rectified. If the mistake is in the cast, the bank making the mistake corrects it; if the figures differ, the out-clearers alter their books to agree with the in-clearers; and should it ultimately prove that the mistake was the other way, the draft is produced and the difference claimed.

When the totals of the out- and in-clearing books are agreed, a sheet, having the printed list of the clearing banks in the centre, and a cash debtor or creditor column on either side, is drawn up by the head clearer of each bank, showing the balance due from or payable to each other bank; the two sides are then cast up, and the balance receivable or to be paid entered on a green ticket if the former, and a white if the latter. This ticket, which has to be signed by the inspector of the Clearing House, is an order to the Bank of England, either to transfer from the money at the credit of the account of the clearing bankers to the receiving bank's account, or from the money at the credit of the paying bank's account to the account of the clearing bankers, the amount of the balance, according as the balance is debtor or creditor.

As described above, the clearing will have taken place without any difficulties, but in practice certain other factors have to be reckoned with.

In the first place, every cheque that passes through the clearing cannot be paid by the banker it is drawn on; some have to be returned from lack of funds on the customer's account, or because the drawer has stopped the cheque, or because the endorsements are not in order, as well as for other reasons.

Such cheques, which must bear a written statement as to the reason for which payment is refused, on being returned to the Clearing House, are distributed so soon as the in-clearer has entered them on the debtor side of his sheet in the same way as the charges, and are included in the balance-sheet before the final balance is struck.

The day's work at the Clearing House now, 1924, commences with the *Metropolitan clearing*. This opens at 9 A.M. on ordinary days, and 8.45 A.M. on Saturdays, and closes at 10.30 A.M. on ordinary days, and 9.50 A.M. on Saturdays.

By the institution of this clearing the necessity for each bank to send out walk clerks to collect payment for cheques drawn on clearing bankers in the Metropolitan area has ceased. Each bank receives at the Clearing House all cheques drawn upon its Metropolitan branches, and forwards them direct to each branch, returns being sent back by post to the crossing banker the same day. There are now (1924) nearly 500 branch banks in this clearing.

All differences in the Metropolitan clearing are adjusted through the Town clearing.

The total of the "in" and "out" charges of the Metropolitan clearing is added to the amount of the Town clearing sheets.

In order to simplify the sorting of the cheques into the three clearings — Town, Country, and Metropolitan—the letters T, C, or M, as the case may be, are added at the bottom left-hand corner of the cheques.

Following on the Metropolitan clearing comes the Country clearing from 10.30 A.M. to 12.30 P.M., except on Saturdays, when the work begins at 10 A.M. and closes at 11.30 A.M. Owing to the fact that cheques in this clearing have to be forwarded to the country, and any returned cheques notified, it is impossible to adjust the balances the same day, or indeed until the next day but one, when they are entered on the Town clearing sheet.

Until 1902 the figures of the Country clearing were merged in those of the Town, but since that year they have been given separately.

The total for 1902 was £870,189,000, for 1913, £1,389,481,000, which had increased to £2,810,654,000 for 1923.

The Town clearing is held in two sessions, morning and afternoon, the morning beginning at 10.30 and the last delivery at 11 o'clock, after which the morning work is agreed. In the afternoon, work begins at 2.30 and the last delivery is at 3.30, when the doors are

shut and no more articles can be received that day. The "out" work having been brought to the House, agreement of the afternoon work takes place. All returns (unpaid drafts) must be delivered by 5 o'clock, and by 5.30 the day's work is done. On Stock Exchange settling days and other busy days the House is kept open a little longer with a corresponding extension for the last delivery of returns.

In addition to the London Clearing House there are now ten Provincial Clearing Houses at:—

Birmingham	£116,182,000
Bristol	57,760,000
Hull	55,695,000
Leeds	51,740,000
Leicester	37,419,000
Liverpool	450,325,000
Manchester	760,560,000
Newcastle-on-Tyne	103,846,000
Nottingham	31,440,000
Sheffield	57,688,000

which cleared in 1923 the amounts set against their names above. R. H. M.

COGNETTI DE MARTIIS, SALVATORE (1844-1891), born at Bari, died in Turin. When still a student of law at Pisa, the war of 1866 broke out. Cognetti marched with Garibaldi and was wounded at the battle of Condino. In 1868 he was appointed teacher of political economy in the Technical Institute of Mantua, and stayed there till 1878, when he obtained the chair of political economy at the University of Turin.

Cognetti considered economics as a branch of sociology. His mind was completely under the sway of Darwin (see DARWINISM and SPENCER). He also thought that economics was not in its proper place in the curriculum of faculties of law, as is the case at all Italian universities, unless taught so as to connect it with other branches of social science, history, ethnology, morals, law, politics, etc. The publication which gained for him his position at Turin was a book on *The Primitive Forms of Economic Evolution* (*Le forme primitive dell' evoluzione economica*), 1881, Loescher, Turin. In this book he discusses economic phenomena—and other social phenomena—among savage tribes and even among animals. His use of the latter illustration was often laughed at. But the book contains many interesting particulars, and became more appreciated in course of time. Among questions discussed therein, and later taken up again by Cognetti himself, I may mention the *origin of barter*, and consequently descriptions of *silent barter*. This topic was then a very novel one. In 1889 he published a book on *Ancient Socialism* (*Socialismo Antico*), Bocca, Turin, in which he traces socialism in ancient legends of Greece and Rome, of India and China, and gives summaries of doctrines of Chinese socialists, such as Mih Teih and Uang Ngan Shi, of Persians, such as Mazdac, and Hindus, such as Vishnu Das Kavi, besides going through all the Greeks. This book, again, was rather unusual, as coming from an economist, but had a better success than the former. It will be explained if I say that Cognetti was a passionate student of literature, and translated Plautus into very good Italian verses, and wrote historical essays. As an economist he wrote in 1891 an interesting book on *Socialism in the United States* (*Il Socialismo negli Stati Uniti*), Turin, a book which is eminently a history of the many socialist sects which have tried experiments in the States. He continued the *Biblioteca dell' Economista*, a collection of translations of foreign authors, which had been started by FERRARA. His prefaces, however, to the various authors whose works are translated, fall very far short from the excellency of those of Ferrara. When a discussion turned on what may be called economic niceties, he was soon out of his depth; very close reasoning was less agreeable to him than historical research. He wrote two more books, one in his true line: *On the Formation, Structure, and Life of Commerce*, and one on *Protectionism and Free Trade*, for which he was less fitted. Cognetti created at Turin a laboratory of political economy, collecting for it funds and a very large library. In this seminary of economic studies he trained some distinguished scholars. He had an extremely genial character, and his house was of an evening open to many friends. He was still full of vigour when he died. A complete bibliography of his writings is to be found in the *Riforma Sociale*, vol. xi p. 705. M. P.

COHN, GUSTAV (1846-1919), was born at Marienweder in West Prussia. He studied at the Universities of Berlin and Jena, and in 1869 obtained a post at the polytechnic at Riga, where he spent three years. After a visit to England in 1873 he published an important work on British railways *Untersuchungen über die englische Eisenbahnpolitik*, and ten years later issued another volume on the subject entitled *Die englische Eisenbahnpolitik der letzten* 10 *Jahre*. After his return from England he was appointed professor at the polytechnic at Zürich, where he remained until 1884, when he became professor of Political Economy at Göttingen. In 1892 he became a member of the Imperial Commission on the Stock Exchange, and as a result of his investigations published his *Beiträge zur deutschen Börsenreform*. As a supporter of the movement for the enfranchisement of women he wrote *Die deutsche Frauenbewegung: Eine Betrachtung über deren Entwickelung und Ziele* (Berlin, 1896). From the time of his visit to England he always maintained an active interest in English economic life.

Cohn published—*Untersuchungen über die englische Eisenbahnpolitik* (Leipzig, 1874-5); *Volkswirtschaftliche Aufsätze* (Stuttgart, 1882); *Die englische Eisenbahnpolitik der letzten* 10 *Jahre* (Leipzig, 1883); *Beiträge zur deutschen Börsenreform* (Leipzig, 1895); *Zur Geschichte und Politik des Verkehrswesens* (Stuttgart, 1900). His most important work, however, is his *System der Nationalökonomie*, published in three volumes (1885, 1889, and 1898) at Stuttgart. He also wrote several articles,

including an article in the *Economic Journal* for 1907 on *Government and Laissez-Faire*. His *System der Finanzwissenschaft* (the second volume of his *System der Nationalökonomie*) was translated in 1895 by T. B. Veblen and published under the title *The Science of Finance*, under the auspices of the University of Chicago.

Professor Cohn served as German correspondent of the Royal Economic Society from its foundation in 1890 until the outbreak of the War. E. L. H.

COLONIAL POLICY—RECENT DEVELOPMENTS.—This article does nor purpose to give a history of the growth of self-government in the British Colonies, a good account of which will be found in Professor Egerton's *Short History of British Colonial Policy*. Neither does it deal with the basis and limits of colonial self-government from the point of view of constitutional theory. For that aspect of the case the reader may be referred to Professor A. V. Dicey's admirable work on *The Law and the Constitution*. The present inquiry is neither historical nor technical nor legal. It is an attempt to examine the relations at present existing between the self-governing Colonies and the United Kingdom, and between these Colonies *inter se* from a purely political and practical point of view.

The inquiry is confined to the Colonies which are commonly described as having "complete self-government" or "responsible government," *i.e.* an Executive responsible to a popularly elected Legislature, and requiring a majority in at least one of the chambers of that Legislature in order to remain in power. This system, which is a reproduction *mutatis mutandis* of the existing unwritten, but none the less unquestioned, constitution of the United Kingdom, prevails in all the larger and more populous Colonies of the Empire mainly inhabited by people of European race. These are the Dominion of Canada, the Commonwealth of Australia, the Dominion of New Zealand, Newfoundland, and the Union of South Africa.

Enormously as these communities differ *inter se* in size, wealth, and population, they are all equals in constitutional status, and they are all intensely jealous of their right to manage their own affairs without interference from the United Kingdom or from one another. So strong has this feeling grown that even the term "Colony" is now objected to, as implying some degree of dependence, and it would, no doubt, conduce to a good understanding if we could all agree to abstain from describing these communities as "Colonies," and call them by some more dignified and appropriate title, such as "States of the Empire."

But this designation at once brings us face to face with the anomalous character of this so-called "Empire," which, as a political entity, has no analogy in history. It is, indeed, far less misleading to describe Canada, Australia, and the other self-governing communities above referred to as "States," than to describe them and the United Kingdom collectively as an "Empire." The United Kingdom and its dependencies, such as India, our various "Protectorates," and the Colonies which are not completely self-governing, may indeed be described as an "Empire" in the ordinary sense of the word. But when we extend the term "British Empire" to include the self-governing States, it is necessary to remember that we are stretching language, and using the word "Empire" in a novel and, etymologically, indefensible sense.

But this abuse of language is justified by practical considerations. It serves to indicate the continued existence of a political bond between the genuine Empire and the self-governing States, which is not the less real because it is exceedingly difficult to analyse and define. And it is worthy of note that the self-governing States are, as a rule, no less jealous of their claim to be regarded as members of the Empire than they are jealous of their "independence" of the United Kingdom and of one another. The word "Empire" is as popular with the people of these States as the word "Colony" is unpopular, and this fact is of immense significance. It testifies to an underlying sense of unity, an enduring desire to remain, in some way or other, though the way is seldom formulated or clearly thought out, members of a single body politic distinct from the rest of the world.

The problem of the future, as far as the British Empire is concerned, is how to satisfy that desire without curtailing the autonomy or hampering the individual growth of a number of self-governing States. Independence on the one side, Imperial unity on the other—are these irreconcilable ideals? Undoubtedly they are if we push the idea of independence too far. There is no binding relationship, however voluntary, no alliance, no partnership, no contract even, which leaves the parties to it absolutely independent of one another. Every form of union implies some limitation to freedom of action on the part of its individual members. But then it is not independence in the sense of the absence of any binding relationship with other parts of the Empire, which the people of the self-governing "Colonies," or at least the majority of them, really desire. They are determined to be independent in the management of their local affairs. And even with regard to affairs not purely local, they have a growing dislike of subordination to any external authority except that of the Crown. But it does not follow that they would not fall in with, and indeed welcome, any arrangement for the management of affairs not purely local,

even though it limited their freedom of action, provided that it was based on the principle of co-ordination, not of subordination. It is perfectly evident that any common institutions, and even any common action, embracing the self-governing Colonies and the rest of the Empire, must start with the idea of partnership, of the voluntary combination of a number of units, equal in status, though no doubt greatly varying in strength, and not with any idea of tutelage or dependence.

The very fact, already referred to, that the self-governing Colonies accept, and even glory in the authority of the Crown, is sufficient evidence that they do not desire independence in the sense of absolutely separate existence. It may be said that they accept that authority only because it is nothing more than nominal; and there is some truth in this argument, but it is not the whole truth. That strong loyalty to the sovereign, which is undoubtedly felt in the self-governing Colonies, is due to something more than gratitude for non-interference. It is due to a feeling of pride in the Crown as an august institution, common to the whole Empire, in which they have just as much lot and part as the people of the United Kingdom. The traditional relationship between the King and his subjects is just the same relationship, whether these subjects are born and reside in Canada, or Australia, or in Great Britain. He is their sovereign, just as much as he is the sovereign of the people of these islands. This is not mere theory. It is the actual sentiment of the people of the self-governing States, and in such a matter sentiment is everything. Wholly different is the Colonial attitude towards every other institution of the "Mother Country," not excepting the British Parliament. That body enjoys and always will enjoy a certain prestige with the younger States of the Empire as being the progenitor and archetype of their own Parliaments, but though they may regard it with respect, they do not feel that they owe it any allegiance. It is in no sense theirs as the Crown is. It does not represent them, but only the people of the United Kingdom. And still less do they feel disposed to bow to the authority of the British Ministry of the day, deriving its power, as it does, solely from the British Parliament in which the Colonies are not represented.

Here then is the problem in a nutshell. The self-governing Colonies, speaking broadly, are "loyal to the Empire." They desire to remain in some sort of political union with the United Kingdom and its dependencies, and with one another. They gladly recognise the authority of the King as the head of that union. But, according to constitutional theory and practice, "the King reigns, but does not govern." And there is no *governing* power, no actual executive authority, under the King, which commands the complete allegiance of the self-governing Colonies, because there is no such authority in the constitution of which they have any share —no common Parliament, no common Minister.

No doubt in theory the Parliament of the United Kingdom is supreme throughout the Empire. It could legislate for the self-governing Colonies as well as for any other part of the dominions of the Crown. But in practice it no longer does so, except at the request of these Colonies themselves, because it recognises its non-representative character as far as they are concerned. The British Ministry, on the other hand, does from time to time take executive action affecting even the self-governing Colonies, as in the case of treaties and negotiations with Foreign Powers, and that action may be not only independent of, but actually contrary to the desires of the Colony or Colonies concerned. In a case concerning the Newfoundland fisheries (1906) the action of the British Government was contrary to the wishes of Newfoundland; in a decision connected with the New Hebrides (also 1906) it was contrary to the views of Australia and New Zealand.

Such incidents are clearly injurious to good relations between the mother-country and the Colonies, and even fraught with danger to the unity of the Empire. Yet under present conditions it may be difficult to prevent their recurrence. They are not due to any want of good-will on the part of British Ministers, but to a difficulty inherent in the loose political organisation of the "Empire." There must be some authority capable of representing the Empire as a whole in dealing with Foreign Powers. As matters stand, the only possible authority is the British Foreign Office, which is a branch of an executive Government in which the Colonies have no part. The practical justification for that government, the government of the United Kingdom, acting on behalf of the Colonies, which it does not truly represent, as well as of the United Kingdom which it does represent, must be sought in the fact that the burden of the defence of the Empire rests almost wholly on the people of the United Kingdom. It is they who would have to bear the brunt of any difference with Foreign Powers, even if it arose over some question directly affecting only one or more of the self-governing Colonies, and in which the United Kingdom itself had only an indirect interest. There is thus a genuine and permanent dilemma. It is only natural that that part of the Empire which is responsible for the safety of the whole should control the relations of the Empire with Foreign Powers. Yet it can never be satisfactory that the United Kingdom should take action affecting the other "self-governing" States without their consent. In so far as it does that, it treats them, not as partner States, but as dependencies, and that, as we

have seen, is a position to which they are no longer inclined to submit, and to which, having regard to their growing strength and importance in the world, it is not reasonable or desirable that they should submit.

The only logical solution lies in a federal system, under which the "self-governing" States would share, to the extent of their ability, the burden of the common defence, and would receive in return a proportional share in the control of policy. But the adoption of anything like a complete federal system is beset with difficulties, which are certainly at present, and may be at all times, insuperable. On the other hand, the pressure of circumstances will certainly necessitate the introduction of make-shift arrangements having a federal tendency. And it is possible that the ultimate result may be the creation of a network of special arrangements between the mother-country and the self-governing Colonies, and between these Colonies *inter se*, providing for the co-operative regulation of various common interests. The alternative is complete separation, to which, however, as we have seen, the sentiment of the majority of the people in all parts of the Empire is opposed.

Recent history, no doubt, contains evidence of a movement in both directions—a movement towards separation, and a movement towards closer union, and there is room for difference of opinion as to which is the stronger of the two. On the one hand, the dissatisfaction felt in the Colonies with the manner in which their external relations have been handled by the Imperial Government has led (notably in Canada after the unpopular settlement of the Alaska Boundary question) to a demand for "the treaty-making power." Great latitude is already enjoyed by the Colonies in dealing with the commercial relations between themselves and Foreign States. But if this tendency were to be carried to the length of giving to each self-governing Colony the right to make treaties with Foreign Powers irrespective of the United Kingdom and of the other self-governing Colonies, it is difficult to see how their position could be differentiated from that of a number of wholly separate States. On the other hand, recent years have witnessed not only a remarkable increase in the sentiment of relationship and community of interest, but a series of attempts, so far not very successful, yet persistently renewed, to provide some means for enabling the governments of the United Kingdom and of the self-governing Colonies to act together in matters of common concern. The most important of these have been the meetings in 1887, 1897, 1902, 1907, and 1911, of the body formerly known as the "Colonial" and now as the "Imperial" Conference. These meetings, at first occasional and informal, have now, by virtue of a resolution unanimously adopted at the meeting held in London in April and May 1907, acquired a more definite and permanent character, and the "Imperial Conference" may therefore be regarded as having become part of the institutions of the Empire. It is, in fact, the only live political institution common to the United Kingdom and the self-governing Colonies, with the exception of the Crown. Its nature and functions were defined by the resolution just mentioned, which, in view of the importance of the matter, it may be desirable to quote in full. The resolution runs as follows:—

"*That it will be to the advantage of the Empire if a Conference, to be called the Imperial Conference, is held every four years, at which questions of common interest may be discussed and considered as between His Majesty's Government and His Governments of the self-governing Dominions beyond the seas. The Prime Minister of the United Kingdom will be* ex officio *President, and the Prime Ministers of the self-governing Dominions* ex officio *members of the Conference.*

"*The Secretary of State for the Colonies will be an* ex officio *member of the Conference, and will take the chair in the absence of the President. He will arrange for such Imperial Conferences after communication with the Prime Ministers of the respective Dominions.*

"*Such other Ministers as the respective Governments may appoint will also be members of the Conference—it being understood that, except by special permission of the Conference, each discussion will be conducted by not more than two representatives from each Government, and that each Government will have only one vote.*

"*That it is desirable to establish a system by which the several Governments will be kept informed during the periods between the Conferences in regard to matters which have been or may be subjects for discussion, by means of a permanent secretarial staff, charged, under the direction of the Secretary of State for the Colonies, with the duty of obtaining information for the use of the Conference, of attending to its resolutions, and of conducting correspondence on matters relating to its affairs.*

"*That upon matters of importance requiring consultation between two or more Governments which cannot be conveniently postponed until the next Conference, or involving subjects of a minor character, or such as call for detailed consideration, subsidiary Conferences should be held between representatives of the Governments concerned specially chosen for the purpose.*"

The importance of this curious resolution consists almost entirely in its implicit homage to the conception of the United Kingdom and the "self-governing dominions beyond the seas" as a potential confederation, and in any case standing to one another on some exceptionally intimate relation of a permanent kind. Apart from this its practical value is small. The

function of the Conference does not go beyond the "discussion" and "consideration" of "questions of common interest." Any decision it may arrive at will still require to be confirmed by each of the States individually before common action can result. And even as a purely consultative assembly the Conference is of very limited utility. "Questions of common interest" are growing in number and importance. They cannot be disposed of in a discussion limited to a few weeks every four years, nor can they be expected to be obliging enough only to crop up, or only to become acute, when such a meeting is impending. Clearly, if the consultation is to be serious, it must be entrusted to some body capable of more continuous activity. An "Imperial Council," not indeed constantly sitting, but capable of being summoned at any time as occasion requires, would appear to be indispensable, if the idea of the several Governments habitually taking counsel together on questions of common interest is to be realised in practice.

But for the establishment of such a Council, even though limited to purely consultative duties, the Conference of 1907 was not prepared. No doubt there was a forward party, consisting of the representatives of Australia, New Zealand, and Cape Colony, who would have been ready to go that length. But the Prime Ministers of Canada and of the Transvaal decisively hung back, and they were supported in that attitude by the representatives of the United Kingdom. And for so important a step as the creation of a common council, unanimity, or at least a great preponderance of favourable opinion, was evidently necessary. So, on the principle that "the pace of a squadron is the pace of its slowest ship," the Conference confined itself to the creation of what may be described as an Imperial Information Office, in the shape of a "Secretariat," the duties of which would seem to consist in keeping up some sort of touch between the members of the Conference in the years intervening between the sessions of that body. Such an office, energetically worked, would be capable of considerable development. And the forward party at the Conference were anxious to give it the maximum of influence and prestige by making it an institution common to the whole Empire, independent of any one Government, and responsible to the Conference alone. In the end the Secretariat was made a department of the Colonial Office. Its existence can only be regarded as a small concession to the principle of continuous common consultation between the several Governments. At the Conference for 1911 the creation of an Imperial House of Representatives, of a standing Committee to preserve the continuity of the Conference between its meetings, of an Imperial Council of Defence were discussed, as well as greater uniformity in Imperial legislation.

Generally speaking, it is the mass of the people in the different parts of the Empire who are most favourable, if not very deliberately or articulately, to the idea of closer union. It is in government and political circles that there is opposition or reluctance. And this is perfectly natural. The bulk of the people, where they are of British origin, are dimly conscious of the ties arising from community of race, history, and traditions, as well as of the advantages of a common citizenship, and it would appear to them unnatural to find themselves wholly separated from their fellow-Britons across the seas. Politicians, on the other hand, even when not playing up to the non-British elements, which in some of the Colonies form a large or even preponderant part of the population, are more alive to the practical difficulties which closer union presents. And they are not uninfluenced by the feeling that the independent Governments and Parliaments, to which they respectively belong, would suffer some diminution of individual importance by entering into a real Imperial partnership. Here and there statesmen of exceptional originality and largeness of mind may rise superior to considerations of that nature. But the average politician is certainly affected by them, alike in the Colonies and the United Kingdom. Indeed, it is especially in the United Kingdom that statesmen of the older school, whether Liberals or Conservatives, seem to find a difficulty in conceiving how the foreign policy of the country could be carried on, if it were complicated by the necessity of acting in conjunction with the self-governing Colonies. And yet it is certain that, as these communities grow in importance and play an increasing part in the world, we must "call them into our counsels," if they are not to develop foreign policies of their own and so to become in time wholly separate States, as British statesmen at one time, almost without exception, expected and desired that they ultimately should do. Nowadays such a desire is felt by few and avowed by none. But "he who wills the end must will the means." And if we seriously desire the United Kingdom and the self-governing Colonies to remain one body politic, it follows that, whatever its difficulties, the policy of deliberate co-operation in matters of common interest, of which the Imperial Conference and the proposed Secretariat are the first rudimentary expressions, must be steadily pursued, and pursued on lines which in the long-run will entirely transform the present constitution of the Empire.

But that transformation will be gradual, and it is impossible to forecast the exact course of it. Whatever the new institutions which may be evolved to meet the new needs, they are likely to be very different from anything which political theorists have yet imagined. It is only possible here to glance at one or two of

the common interests which may compel the creation of common institutions. Among projects tending to promote communication between different parts of the Empire there are none which find more general favour than an all-British steamship route and an all-British system of submarine cables. If either of these were established, it could only be by contributions from the several portions of the Empire directly interested; and, indeed, it is probable that, either in the first instance, or ultimately, the ships and the cables would be the property of the contributing States. The administration of that property would require a Board on which all the owners must be represented. But the common property would not only have to be administered, it might need to be defended. It would only be logical that all the owners should combine to guarantee its protection from external interference. Another and an even more important case for co-operation is in future likely to arise in connection with the dependencies of the Empire. At present the dependencies, from the great dominion of India down to the smallest coaling station which is not situated in one of the self-governing Colonies, are under the exclusive control of the United Kingdom. But there are some of them in which certain of the self-governing Colonies are even now more directly interested than the United Kingdom is, and with regard to others the interest of the self-governing Colonies is certain to increase. Australia and New Zealand are bound to make themselves felt in respect of the British islands of the Pacific. Federated South Africa must certainly have something to say about the Protectorates beyond the Zambesi. But Great Britain is not likely to abdicate her authority in either quarter. The necessities of the case demand some arrangement by which the burden and responsibility will be shared between the mother-country and the self-governing Colonies immediately concerned. This will be furthered by the remarkable proof of loyalty shown in the liberal support recently given by the Colonies to the maintenance of the navy. The above are but a few instances of the way in which the growing complexity of Imperial relations will compel changes in the machinery of government.

In this brief review of the tendencies making for or against the closer union of the different portions of the Empire nothing has been said on the subject of Preferential Trade. In the opinion of many—and it is an opinion shared by the present writer—the adoption of preferential trade arrangements between Great Britain and the self-governing Colonies would be a powerful factor in promoting Imperial consolidation. Public opinion in the Colonies has been inclining more and more strongly towards this view. But the question is too large to be treated within the limits of the present article. [See TARIFF REFORM MOVEMENT.]

The object of the preceding observations has been to direct attention to other aspects of the situation, at present liable to be thrown into the shade by the concentration of public interest on the question of preference and the acuteness of the controversy with regard to it.

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COLONIES: GOVERNMENT OF, BY COMPANIES.* Since the first edition of this dictionary the British South Africa Company has fulfilled its destiny by effecting the practical settlement of some of the best parts of Africa; the colonists whose development it fostered have grown strong enough to claim the right to separate administrations, and the Colony of Southern Rhodesia, with its own responsible government, became on 1st October 1923 the latest addition to the series of self-governing British states. C. A. H.

COMMERCIAL INTELLIGENCE (UNITED KINGDOM). ORIGIN AND DEVELOPMENT.—To meet the desire expressed by the British commercial community for greater assistance by the Government in the development of their overseas trade, a committee was appointed by the Board of Trade, July 1897, to inquire into and report upon "the dissemination of commercial information

and the collection and exhibition of patterns and samples." The report was published in 1898 (Cd. 8962).

As a result of this report, the Commercial Intelligence Branch was opened, October 1899, at offices in Parliament Street. In April 1904, in order to be of greater advantage to business men, it was transferred to the city, to 73 Basinghall Street, E.C.2. Here information on all subjects of commercial interest was collected and focussed in a form convenient for reference. The offices of the branch contained an inquiry room where personal inquiries could be made on the subjects dealt with ; a sample room for the exhibition of specimens of interest received from the Imperial Institute, India, and the Colonies, or illustrative of reports of H.M. Consuls, or of the correspondents or special commissioners of the Board of Trade ; and a reading room, where the latest official publications—British, Colonial, and Foreign—and the latest issues of Trade Directories could be consulted.

Owing to the increasing use by business men of the facilities afforded, the scope of the branch was extended in various ways, particularly by the incorporation of the exhibition branch of the Board of Trade, and in 1917 it was raised to the status of a department of the Board of Trade.

As a consequence of the changed conditions brought about by the War of 1914-18, the department was further increased in 1918 by the addition of the War Trade Department of the Foreign Office.

The enlarged department thus created, known as the Department of Overseas Trade (Development and Intelligence), was placed under the joint control of the Foreign Office and the Board of Trade, and is represented in Parliament by a Parliamentary Secretary.

The head office is at 35 Old Queen Street, S.W.1, in close proximity to the Board of Trade. The city branch at 73 Basinghall Street, E.C.2, has been retained, and a Foreign Samples Exhibition and Library of Trade Catalogues has been opened at 7-11 Old Bailey, E.C.4.

Organisation at Headquarters. — The governing principle is that of co-operation between officers who have special knowledge of particular markets and officers having experience of particular industries. Accordingly, the department, so far as concerns the collection and distribution of commercial intelligence, falls into geographical and trade sections.

Each geographical section deals primarily with correspondence from its territory, and especially with the correspondence of the commercial, diplomatic, and consular officers, or the trade commissioners and trade correspondents in that territory.

Each trades section handles the correspondence with firms in this country in its particular trade, and is responsible for the distribution of commercial information relating to that trade.

An exhibition and fairs division has been formed to deal with the organisation of the British Industries Fairs and exhibitions of foreign samples and catalogues, and to study and initiate projects for commercial exhibitions of various kinds. A general division controls the reference library, where British and foreign trade papers are filed, and the sections of the office where information on tariffs, statistics, and transport is collated. An economic and editorial section deals with the preparation and editing of special and annual reports on economic and trade questions and banking matters.

Overseas Organisation.—The department is served by representatives throughout the world, who maintain a constant supply of information to the home centre and provide local assistance in the promotion of British trade. The department has control of the following services for this purpose:—

1. The Trade Commissioner and Imperial Trade Correspondent Services in the Empire.
2. The Commercial Diplomatic Service forming part of the British Diplomatic Missions in foreign countries.
3. The British Consular Service in foreign countries.

In the Empire there are now fourteen trade commissioners at work, covering Canada and Newfoundland (4), Australia (2), New Zealand (1), South Africa (2), India and Ceylon (3), East Africa (1), and the British West Indies (1), assisted by imperial trade correspondents at a few of the most important centres. The department also has the services of correspondents in parts of the Empire in which at present there is no trade commissioner.

In place of the handful of pre-War commercial attachés, a new service, styled the Commercial Diplomatic Service, has been established. The members of the Commercial Diplomatic Service are styled "commercial counsellors" in the highest grade and "commercial secretaries" in the three lower grades. There are twenty-eight of these officers who are stationed in all the more important foreign markets of the world. They are members of the staff of the British Embassy or Legation in which they serve, and rank with the diplomatic officers of corresponding grades, with whom they co-operate in matters political as well as commercial.

The Consular Service has been under control of the Department of Overseas Trade since October 1919. Consular officers report direct to the department, and are also, as regards the commercial side of their work, under the general supervision of the commercial diplomatic officer for the area in which their district lies. This arrangement ensures that special prominence is given to the commercial side of consular work, and by the co-operation of the two services a complete network of govern-

ment commercial representatives is thrown over foreign countries.

NATURE OF INTELLIGENCE COLLECTED.—The information collected by the department's overseas officers relates, *inter alia*, to :—

(*a*) Contracts open to tender ; (*b*) Overseas demand for particular goods ; (*c*) Lists of importers of various goods in overseas markets ; (*d*) Suitable agents for British manufacturers and merchants ; (*e*) Best methods of marketing and distribution, credit conditions, terms of payment, nature of competition and the best way of combating it. (*f*) Customs tariffs and regulations, regulations governing commercial travellers, registration of trade marks, consular invoices, etc. ; (*g*) Statistics of imports and exports ; (*h*) Shipping and transport ; (*i*) Manufacturers of any specified goods in the United Kingdom ; (*j*) Sources of supply of raw materials and of goods not manufactured in the United Kingdom.

HOW THE INFORMATION IS OBTAINED.—Every effort is made to maintain a constant supply of information from the overseas officers to the department, and to provide local assistance in the promotion of British trade. To secure this, overseas officers furnish answers to specific inquiries, either direct to applicants or through the Department of Overseas Trade. Overseas officers are also encouraged to conduct investigations on their own initiative. In addition, inquiries to be conducted by local officers on the spot are frequently initiated at headquarters ; while from time to time the department, in co-operation with important trade associations, despatches special missions to investigate the condition and prospects of trade in particular classes of industrial products in various overseas markets.

All the overseas officers of the department, including consular officers, have been instructed to forward without delay information of interest to British Commerce, using the telegraph if necessary.

METHOD OF DISTRIBUTING COMMERCIAL INFORMATION.—The information reaching the department through the channels indicated is distributed by one or other of the following methods :—

General (*non-confidential*) *Information.*—Answers to personal or written inquiries on specific subjects are communicated personally or by letter direct to the applicant. Information of general interest received in the ordinary course of business, and not as the result of special inquiry, is disseminated by circular letter to particular classes of traders, to Chambers of Commerce, etc., for the information of their members, by publication in the *Board of Trade Journal* or by notices to the Press.

A regular feature of many trade papers (apart from the official *Board of Trade Journal*) is a column of "Openings for British Trade Abroad." Publicity is also given in the most important papers to articles written with the object of supplying trustworthy information on, and fostering interest in, overseas markets. Information is supplied by the department to the Press for these purposes.

Other methods employed with regard to non-confidential information comprise the issue of annual reports dealing with the industrial, commercial, and economic conditions prevailing in overseas markets ; the organisation of trade fairs with the object of attracting important overseas buyers and bringing them into touch with the British producer ; and the organisation of exhibitions of foreign goods and catalogues for the guidance of British manufacturers who may be able to produce competitive articles.

Confidential Information.—Much information received is of a confidential nature, or is of such value that it should not be allowed to become available to foreign competitors. It is, therefore, undesirable to give it general publicity. For such cases there are two channels of distribution—the first known as the Special Register and the second as Form "K."

The "Special Register" Service.—The trader who can command a prompt supply of confidential information as to trading conditions and developments overseas, and as to specific openings for British trade, is in an especially favourable position for securing business. The Department of Overseas Trade helps in this respect through its "Special Register," on which firms should enrol if they desire to receive such confidential information. Registered firms are grouped and classified according both to the nature of the goods and the markets in which they are interested.

United Kingdom firms engaged in export trade supplying goods solely or mainly of United Kingdom production are eligible for admission to the Register on payment of a small annual fee, which may be made to include subscription for the weekly *Board of Trade Journal*.

Form "K."—Brief reports covering the main preliminary particulars which a firm in this country contemplating business with an importer abroad would wish to know are forwarded to the department by consular officers in foreign countries in the form known as Form "K." Particulars are given of the class of goods imported by the firm reported on by the Consul, the general nature of the firm's business, and the name of its agent in the United Kingdom, if any. The information is made available to traders through the medium of the Association of British Chambers of Commerce, the Federation of British Industries, and certain other trade associations. Firms interested should apply to their Chamber of Commerce or trade association.

VISITS OF OVERSEAS OFFICERS TO COMMERCIAL AND INDUSTRIAL CENTRES.—Arrangements have been concluded whereby Overseas

Officers of the department when on leave in this country make a tour of the principal industrial and commercial centres in order to place personally at the disposal of manufacturers and traders first-hand information as to the condition and prospects of British trade in the Dominion or foreign country, as the case may be, where they are stationed. On these occasions also they are empowered to undertake special investigations, within reasonable limits, for individual firms or traders.

Trade Fairs and Exhibitions.—A modern development of the department's activities has been the inauguration of a series of trade fairs, including the British Industries Fair. These afford manufacturers and traders unique opportunities of displaying their goods before the buyers of all nations.

Exhibition of Samples and Trade Catalogues.—An extensive collection of foreign-made goods which find a ready sale in overseas markets has been made, and is constantly being augmented. Endeavours are made to quote selling prices, extent of demand, etc. After preliminary exhibition at various industrial centres, *e.g.* Birmingham, these samples are later placed on permanent view at 7-11 Old Bailey, London, E.C.4. In the same building is housed a library of over 13,000 foreign catalogues. This is of special interest to British manufacturers as showing various methods of foreign advertising. An index to the library may be obtained on application to the department.

Co-operation with the Business Community.—In addition to sending its Overseas Officers on trade tours round the United Kingdom, members of the Home Staff are sent at regular intervals to home industrial centres to learn their requirements and conditions and to consult with traders on questions affecting the trade of their district.

An Advisory Committee of prominent business men, representing various classes of the business community, has been formed to advise the department in its work and to strengthen the links between the department and Chambers of Commerce, Trade Associations, and manufacturers and traders generally. T. G. G.

COMMERCIAL ROUTES.* Changes in commercial routes have resulted from some of the great inventions dating from the close of the eighteenth century, and the modes in which these changes have been brought about deserve consideration in some detail. The most important of these inventions was that by which steam power was applied to locomotion. This was first effected on a commercial scale on the water, but very soon after on land, and steam railways were in the end the chief means of changing the direction and the relative importance of trade routes. They first made it possible to fill the large ships by which the cheapest ocean carriage is effected with bulky goods collected from the interior of vast continents. Hence arose the concentration of such traffic on a comparatively small number of great ports in the areas of despatch and of reception of goods of that class. These ports naturally became the entrepôts for the collection and re-despatch of articles of greater value in proportion to their bulk, which thus came to share in the advantages of large scale transport. In the regions of origin of the bulky goods these ports are naturally situated at the points most convenient for their concentration on the seaboard, in the regions of reception at the points best situated for supplying the largest populations consuming these goods. In India, for example, the new ports of Bombay, Calcutta, Madras, and Karāchi, replaced the old ports of Cochin and Calicut, which had such renown in the days in which pepper and spices had such pride of place in world commerce. In the west the growing wealth of England made London the great entrepôt, all the more because it is so situated as to be connected by short and hence frequent sailings with several other great seaports on the continent.

In North America the trade routes need more consideration. Early in last century three great ports on the Atlantic side, New Orleans, Philadelphia, and New York, had been brought into existence through the traffic collected by the rivers on which they stand, the Mississippi, the Delaware, and the Hudson. Of the two Atlantic ports, Philadelphia was the more important and the more populous city in the first quarter of that century, but a change was made in favour of New York by the opening of the Erie Canal, which passes through the Mohawk valley between the Appalachian Mountains on the south and the Adirondacks on the north, and connects the navigation of the great lakes at Buffalo above the falls of Niagara with the navigation of the Hudson below the falls at Troy, 140 miles north of New York, thus bringing this port into much easier connection with the rapidly growing farming population behind the Appalachians. The supremacy of New York was confirmed and enhanced when railways followed the same route, the physical features here making this northerly deviation of the route to the west so obviously convenient that this route cannot be challenged by any other rail route. But there is another competitor for western traffic during the summer half-year in the St. Lawrence route, completed before 1830, to the head of Lake Huron by canals to avoid falls and rapids, and in 1855 to Lakes Superior and Michigan by the construction of the first of the short canals at the rapids of Sault Ste. Marie (the "Soo"). But this navigation does not allow of the establishment of a commercial route for sea-going ships. For such vessels Montreal still remains the terminus,

but the establishment of such a route is still looked upon by many on both sides of the British-American frontier as a desideratum, and schemes for the purpose are now actively discussed.

There are thus at present three competing summer routes for the carriage of western grain from the wheat-growing areas of North America to the sea-board, an all-rail route, or rail routes, by the lakes to Buffalo and then by the Erie Canal, and by water all the way to Montreal, where transhipment takes place.

Another competing route for the eastward carriage of the produce of north-western Canada has been strenuously advocated for many years. This is known as the Hudson Bay route, inasmuch as it would touch the north-west at some port, probably Port Nelson, on the south-west of Hudson Bay. If carried out it would have the great advantage of being much shorter for Western Europe than any other existing or proposed route, with a port of shipment several hundred miles nearer to the wheatfields than Montreal, which is 1424 miles from Winnipeg, and separated from that city mainly by a vast region of Archæan gneiss, doomed for the most part to perpetual sterility and hence capable of cultivating very little intermediate traffic. The success of the shorter route depends, however, on the possibility of navigating Hudson Straits for a sufficiently long season after the grain is ready for export, and at present prevailing opinion seems to be against the prospects of success.

But other competition for the carriage of the grain of the north-west to Europe as well as other destinations has arisen in the west, and since the opening of the Panama Canal, August 1914, has developed with great rapidity. The British Columbian ports of Vancouver and Prince Rupert both serve as outlets for that region, notwithstanding the considerable height of the passes that have to be crossed to reach them. Some wheat and flour destined for Eastern Asia passed by way of Vancouver in the early years of the present century, but the rapid growth in the shipment of grain from this port dates from about 1920, since which year great additions to the provision of elevators at the port for dealing with the grain trade have been made. The greater part of the shipments, however, are not for Eastern Asia, but for Europe by way of the Panama Canal. The whole of Alberta and the western portion of Saskatchewan are said to have definitely adopted Vancouver as their chief port for this trade, but in future an increasing proportion of this trade is likely to pass by way of Prince Rupert, which, among other advantages, has that of a lower pass (3712 feet as against 5344 feet), with easier gradients across the Rockies (maximum gradient on the Prince Rupert route, 0·5 ; on the Vancouver route, 2·2 per cent for east-bound, 1·2 for west-bound trains). Both ports also have other bulky products from their immediate neighbourhood, timber, canned fish, fruit, etc., to facilitate the filling of large ships passing through the Panama Canal, and, as compared with the eastern Canadian outlets, have the great advantage of being open all the year round.

In the Old World the Siberian railway, completed in 1904 by the building of the difficult section round the south end of Lake Baikal, has already been mentioned. Much tea, formerly carried by camel caravans across the Gobi desert to the twin towns of Maimachin, on the Chinese, and Kiakhta, on the Russian side of the frontier, was introduced into Russia in pre-War days by this route without displacing the caravan traffic altogether, together with furs, gold, and graphite from Eastern Siberia, but the principal new traffic developed by this railway before the War was that in butter, the import of which from this source into the United Kingdom had come to be one of the most important contributions to our supplies of that commodity. Though the railway passes through regions as well adapted for wheat-growing as the Canadian North-West, the carriage of wheat westwards never attained great magnitude, owing to the great length of railway haulage involved in reaching the important markets and the small value of the article in proportion to its bulk even as compared with butter.

In Africa railways, unfortunately on different gauges, have penetrated far into the interior from the north (Egypt), east, and south. Of these the Uganda railway, ascending in the Kenya Colony to altitudes above 7000 feet, where the climate is suitable to Europeans at least as directors of plantations cultivated by natives, and terminating in a region producing increasing supplies of coffee, raw cotton, and other tropical products, is particularly important. The "Cape to Cairo railway" has reached Bukama, the head of easy navigation on the Lualaba, one of the head-streams of the Congo, a little south of 9° S., but there seems little prospect of this grandiose design being accomplished in the near future.

In Europe we meet with some interesting illustrations of combinations of sea and rail routes different from those chiefly referred to already, but naturally arising from the peninsular structure of the greater part of the continent and the importance of some of the European islands. The avoidance of the great roundabout connecting the seas on the north and south side of this peninsula was obviously desirable for passenger and for much goods traffic. Unfortunately there is only one route throughout the whole length of the peninsula from east to west not barred more or less by mountains, the route offered by the Rhine and lower Rhone valleys. This is clearly insufficient. Brief reference has already been made to the Trans-Alpine railways. Increasing engineering

skill has allowed of the establishment of easier connections between the opposite sides, even where the obstructions were most formidable, and it is worth noting that the tunnels successively pierced, down to the opening of the Simplon in 1906, are nearer and nearer base levels, at lower altitudes, and consequently longer but with easier gradients in the approaches.

That the railway connections through the Balkan Peninsula, where the engineering difficulties are less than in the Alps, should have come at a later date than most of the great Alpine tunnels is not surprising in view of the smaller commercial importance of this part of Europe, even including the peninsula of Asia Minor. The railway to Constantinople (1949 miles from Paris) by Belgrade and the valleys of the Servian Morava, the Nishava, and the Maritsa, and that to Salonica (1726 miles from Paris) by the upper Morava and Vardar valleys, both came seventeen years after the opening of the Mont Cenis and six years after that of the St. Gothard tunnel in 1888. The passes crossed on either route are only about 2500 feet high.

The railway to Constantinople is continued from Haidar Pasha on the opposite side of the straits by another railway on the same gauge to Konia, whence it is continued by the Baghdad railway, also on the same gauge, through Northern Syria to Nisibin (after bridging the Euphrates at the pre-historic crossing-place of Jerablus), with branches to Alexandretta and Damascus by Aleppo. But at Nisibin begins a break between this system and the narrow gauge railways of lower Mesopotamia (Iraq).

All the main railways of Europe except those of the Iberian Peninsula, pre-War Russia and Greece, are on the same gauge, 4 feet 8½ inches, the gauge first fixed on the early railways of the Newcastle district, and afterwards adopted on all the main railways of North America. There are also lines on the prevailing European gauge from both Berlin and Vienna to Warsaw.

A peculiar association of rail and water traffic is that formed by train-ferries—vessels with rails on their decks to carry whole trains across intervals of water. Vessels of this kind plied across the Firth of Forth between Granton and Burntisland from about the middle of last century until the construction of the Forth Bridge. Now such ferries have for some years connected Jutland with the Danish islands of Funen and Seeland, and this island at Copenhagen with the mainland of Sweden at Malmö, and longer ferries connect Prussia with Sweden both by way of Denmark (Warnemünde to Gjedser in the south of Seeland) and direct (Sassnitz on the island of Rügen to Trelleborg in the south of Sweden).

During the War several train-ferry routes were in operation between England (Richborough and Southampton) and the continent. In 1921 the Richborough-Calais route was reinstalled as a private undertaking, and in 1924 another route of the kind was opened between Harwich and Zeebrugge.

Comparatively few inland waterways are of great importance as trade routes or part of trade routes. Delusive expectations are very widely entertained as to the importance of this means of transport. These are based on the unquestioned fact of the relative cheapness of mere haulage or propulsion on the water as compared with any mode of land carriage. Yet the facts that should dispel such delusions and enable one to estimate the conditions in which inland water transport is likely to be really economical are simple. Water carriage is likely to be advantageous in proportion to the extent to which the mere cost of haulage or propulsion enters into the total costs of transport, including loss of time and the number and cost of handlings between the place of origin and the destination of the goods. The importance of the latter consideration is well illustrated by the establishment of train-ferries for the express purpose of avoiding break of bulk. The enlarged Erie Canal, adapted to vessels of 1000 tons, opened for traffic in 1918, has never, down to 1923 inclusive, carried one-tenth of its full capacity.

Incidental reference has already been made to changes in ocean traffic due to the opening of the Panama Canal. This is the engineering work that has had most influence on ocean routes since the opening of the Suez Canal in 1869, but it cannot effect changes of such magnitude as those due to the earlier great ocean canal. It greatly shortens indeed the routes between most points on the west coast of America and both sides of the Atlantic Ocean, as well as those between most points of the east side of America and the western parts of the Pacific, but for the principal ports on the Atlantic sea-board of the United States the shortening of the route is appreciable only for the extreme east of Asia—the Japanese Islands and the Philippines and the ports of China from Shanghai northwards; and it is doubtful whether the shortening to Shanghai is sufficient to counterbalance the advantages of the Mediterranean route for this port. For traffic with Great Britain the new canal shortens considerably the route to New Zealand but not to Australia. In addition to the bulky cargoes already mentioned from the western ports of North America, the Panama Canal has proved to be more important for the carriage of Chilean nitrates to eastern North America and Europe than was anticipated. Probably the great increase in transport costs since the War has made the advantage of reduced mileage sufficiently great to make the change from sailing vessels round Cape Horn to steamers through the canal remunerative.

The great difference on ocean routes due to

the early inventions referred to at the beginning of this article lies in the independence of winds enjoyed by steamers. These are thus enabled to choose the shortest route between two ports when the outline of the coasts and other physical conditions allow of it and other considerations do not render some deviation from the great circle route preferable. The shortest route between any two points on a globe is a great circle, that is, a circle which has for its centre the centre of the globe. All meridians are thus parts of great circles, and all north-south routes are the shortest possible. But it is otherwise with east-west routes. The only east-west route that forms part of a great circle is one on the equator. The farther one goes from the equator the more does the great circle deviate from the parallel, in the northern hemisphere towards the north, in the southern towards the south. It is in the Pacific Ocean that physical conditions offer the greatest freedom in following great circle routes. From San Francisco the great circle route to Yokohama, which lies in a latitude about two degrees farther south, carries one northwards nearly to the Aleutian Isles—to a latitude more than ten degrees farther north than the port of embarkation. From Vancouver the route is still more northerly and shorter. In sailing thence to Yokohama one is out of sight of land only for two or three days. Shortly after the last of the Aleutian Isles is left behind the first of the Kuriles is picked up. Still shorter is the route from Prince Rupert, which is passed on the great circle route from Vancouver. This fact will no doubt also tend to stimulate the development of the Canadian grain trade to the Orient by that route.

In the geography of the Atlantic Ocean it is an important feature that all the ports of the United States south of Cape Hatteras are approximately on the great circle route from the mouth of the Gulf of Mexico to the entrance to the English Channel, and that most of the ports of Brazil are approximately on the great circle route from the north-west of Africa (the Cape Verde Islands) to Buenos Aires. In the north-west of the Atlantic, south of Nova Scotia and Newfoundland, the routes of steamers from the eastern ports of the United States to north-western Europe are modified in accordance with the average range of floating ice at different periods of the year, and the Hydrographic Office of the United States recommends for east-bound vessels a great circle route, beginning somewhere about 47° W. and between 39½° and 41½° N., according to the time of year, and for west-bound vessels, one ending about one degree north of the beginning of the east-bound route. In the Southern Ocean the adoption of great circle routes, say from Cape Town to Australia or New Zealand to Cape Horn, is precluded by ice.

But the routes of steamers are also largely governed by other conditions. Most important is the nature of the bulky cargo obtainable at different places. It is the business of the shipper to avoid, so far as possible, the necessity for sailing in ballast. For ships leaving Great Britain the chief bulky outward cargo is coal. Hence many shipping routes from this country are designed to get bulky cargoes of grain, timber, potatoes, fruit, and the like homeward with as little ballast sailing as can be managed. So too, since the development of the export of coal from Natal, another triangular route has become common. Vessels bringing cargoes by the Atlantic to Durban, carry coal thence to India, and other cargoes thence to Europe by the Suez Canal.

The United States has also, since the outbreak of the War, and more particularly since the opening of the Panama Canal, been carrying on an increasing export of coal, and as Norfolk and Newport News, at the mouth of Chesapeake Bay, the outlets for some of the best American steam coal, are not much off the great circle route from the mouth of the English Channel to the Panama Canal, they have become much frequented coaling stations.

Coaling stations generally are naturally established at points where important commercial routes converge, such as Teneriffe, Gibraltar, Malta, Port Said, Aden, Colombo, Singapore, and Hong-Kong, and, since the development of the Natal coalfields, Durban, whose harbour, in order to meet the requirements of that trade, has been greatly improved. Such stations are, for the same reason, convenient for the development of great entrepôt trade, even though they may have little or no trade of any other kind.

The invention of internal combustion engines has had a marked influence on the means of transport; but the chief thing to note under this head in connection with commercial routes is that it has given increased importance to ordinary roads. Motor vehicles have thus the advantage over railways which railways have over internal waterways, that of bringing many more points into communication with one another, and so favour the dispersal of manufacturing industries, especially those for which cheap land and the possibility of bringing the producer into direct contact with the consumer are great considerations. Further motor roads, many hundreds of miles long, have been made on routes where railways are at present too expensive. One such road has been made on the ancient route from Beirut by Damascus and Baghdad to central Persia. The motor is also now used to link up the navigation of the Nile basin with that of the Congo, and to connect the railhead of the Benguela Railway with the navigation of the Upper Congo river. With motors of a special design successful journeys have even been made across the Sahara. In these ways the invention is one likely to benefit the mass of the people.

The same thing cannot be said of the aeroplane, the other vehicle that resulted from this invention. Notwithstanding the fact that the aeroplane can probably make use of great circle routes to an even greater extent than ocean vessels, there seems little prospect of this method of transport acquiring any considerable commercial value, and where it does so, as between large cities like London and Paris, that value is based essentially on the fact of there being enough exceptionally rich people to pay heavily for the luxury, whether for utility or for the gratification of their whims. True, the governments of most of the great powers have thought it worth while to subsidise this mode of locomotion, but that is as a "key industry"—that is, one carried on, apart from economic considerations, as being thought vital, at least indirectly, to the interests of the country—in this case probably not so much in the hope of the aeroplane becoming a really useful means of transport as because of the menace of its appalling efficiency as an agent in destruction.

[Wilh. Götz, *Die Verkehrswege im Dienste des Welthandels* (Stuttgart, 1888).—Ferd. von Richthofen, *Siedlungs- und Verkehrsgeographie* (Berlin, 1908).—Kirkaldy and Evans, *History and Economics of Transport* (London, n.d.).—G. G. Chisholm, *Handbook of Commercial Geography* (London, 9th ed., 1922).—J. Russell Smith, *Industrial and Commercial Geography* (New York, 1912; London, 1913).—Kurt Hassert, *Allgemeine Verkehrsgeographie* (Berlin, 1913).—A. J. Sargent, *The Seaways of the Empire* (with many useful charts showing the volume of traffic by different routes), based on pre-War data: London, 1918.—W. Tetley Stephenson, *Communications* (in the *Resources of the Empire Series*), London, 1924.]

R. L.; G. G. C.

COMPANIES, INCREASE OF.* The following table, compiled from the last return of the Board of Trade, shows the number of limited companies registered in each year, since 1890, under the Companies Acts, and brings down to date the figures comprised in the original article on p. 369 of this volume:

Year.	England.	Scotland.	Ireland.	Year.	England.	Scotland.	Ireland.
1891	2363	153	81	1907	4704	333	115
1892	2279	157	69	1908	4557	265	110
1893	2238	184	93	1909	5746	406	116
1894	2593	203	89	1910	6622	348	121
1895	3458	258	89	1911	5900	343	128
1896	4219	304	135	1912	6707	393	168
1897	4675	328	145	1913	6782	399	140
1898	4550	379	136	1914	5599	375	123
1899	4444	323	112	1915	3695	212	95
1900	4408	336	115	1916	3010	213	94
1901	3069	203	86	1917	3540	244	111
1902	3526	247	77	1918	3069	204	112
1903	3620	257	115	1919	9704	668	220
1904	3421	241	103	1920	9952	685	224
1905	3872	284	97	1921	6287	405	..
1906	4331	323	112	1922	7846	458	..

A. A. U.; T. G. G.

CONIGLIANI, Carlo Angelo (d. 1901), an Italian economist, disciple of Ricca Salerno. He wrote chiefly on questions of public finance, and studied the application of the doctrines of the Austrian School of Economists to the theory of the incidence of taxation.

He published: *Un nuovo sistema di tariffe ferroviarie* (1890); *Teoria generale degli effetti economici delle imposte* (1890), his most important work; *Le dottrine monetarie di Francia durante il medio evo* (1890); *Il diritto publico nei sistemi finanziari* (1892); *Le leggi scientifiche della finanza* (1894); *L' indirizzo teorico della scienza finanziaria* (1894); *L' economia capitalista nel sistema economico del Loria* (1895); *Per l' imposta progressiva* (1896); *La riforma delle leggi sui tributi locali. Studi e proposte* (1898); *Saggi di economia politica e di scienza delle finanze* (1903) was published after his death. E. L. H.

CONSIDÉRANT, Victor Prosper (1808-1893), was born at Salins, Jura, in 1808, and entered the polytechnic school in Paris in 1826. He became a captain of engineers in the French army, but falling under the influence of the doctrines of Fourier he gave up his post in 1830 in order to preach at Metz the theory of the phalanstery. He wrote in the papers that were issued by this school of Socialist thought, and on the death of Fourier in 1837 he became director of the review entitled *La Phalange*. The *Phalange*, however, succumbed to the difficulties which it encountered and was replaced in 1845 by a daily paper, *La Démocratie pacifique*. After the revolution of 1848 he was elected to the Constituent Assembly by the Department of Loiret, and to the Legislative Assembly by the Department of the Seine. He rarely spoke in the legislature, and brought forward proposals which only excited ridicule. Yet he preached "Fourierism" with moderation and refused to associate himself with the more extravagant of the earlier doctrines. Through his participation with Ledru-Rollin in the democratic movement of 13th June 1849 he was compelled to retire to Belgium, whence he sailed to Texas to make a fresh attempt at the application of his system. He returned to Brussels in the following year, where he was charged with conspiracy against the safety of the State and underwent a short term of imprisonment. On regaining his freedom he went back to Texas, where he established the communistic society of "La Réunion." He finally returned with his family to Paris, where he spent the remainder of his life in poverty.

He published: *Destinée sociale* (1834-44)'; *Théorie de l'éducation naturelle et attrayante* (1835); *Débâcle de la politique en France* (1836); *Manifeste de l'école sociétaire fondée*

par Fourier, ou Bases de la politique positive (1841); *Principes du socialisme* (1847); *Théorie du droit de propriété et du droit au travail* (1848); *Le Socialisme devant le monde, ou le vivant devant les morts* (1849); *La dernière guerre et la paix définitive de l'Europe* (Brussels, 1850); *La Solution, ou le gouvernement direct du peuple* (1851). E. L. H.

CONSULAR REPORTS,* BRITISH. Prior to the year 1886 the reports of diplomatic and consular officers abroad on trade, finance, etc., were published by the Foreign Office only during the session of Parliament, or shortly after its close, when a sufficient number had been received to make a fair-sized Blue Book. Under this system, a person requiring a particular report was compelled to purchase a volume containing much extraneous matter, possibly of no interest to him, and at a cost in excess of the value of this information. Moreover, while one report might be printed and ready for publication, it had to wait till others were received in a sufficient number to make up a Blue Book. The value of the earlier reports was thus diminished by delay. In 1886, in view of these objections, it was decided to publish each report separately, both during the session of Parliament and in the recess, and they were thenceforward issued promptly and at a price which rarely exceeded a few pence.

Ordinary Consular Reports were divided into two categories, "Annual" and "Miscellaneous." The former comprised reports on Trade, Finance, Agriculture, etc., annually required from His Majesty's missions and consulates abroad; the latter reports on subjects of general economic interest, either specially called for by the Secretary of State, or voluntarily submitted for publication by their authors. Between 1886 and 1916, 5566 Annual Reports and 687 Miscellaneous Reports were issued in the separate form. About 250 reports were published annually. Occasionally information was required from different countries on a specific subject, in connection with current legislative problems, etc. The replies were then all published together, thus consolidating the information in one book. Such collective reports were known as the "Commercial" series, *e.g.* the collection of reports respecting "Bounties on Shipbuilding, etc." (Commercial No. 4, 1901.) Annual Reports were intended, when possible, to reach the Foreign Office on or about the 31st March following the year to which they related. The majority of the reports appeared between April and August. Vice-Consuls sent their annual reports to the superintending Consul of their district, who forwarded them, after revision, as annexes to his own report. Thus the report of the Consul-General at Smyrna covered also the reports of the Vice-Consuls at Adalia, Aivali, Mitylene, Rhodes, Samos, Scala Nuova, Scio, and Tenedos.

Consuls were required to divide their Annual Trade Reports into distinct sections in the following manner:—

(1) Trade and Commerce; (2) Shipping and Navigation; (3) Population and Industries; (4) Other matters.

For details as to the variety of subjects to be dealt with under these main headings reference should be made to the article on COMMERCIAL INTELLIGENCE.

In important agricultural districts separate reports on Agriculture were required.

In the Agricultural Reports particular attention had to be paid to the nature and yield of crops, to the import and export of cattle, diseases of cattle, and other matters of interest to agriculturists. Outbreaks of disease among cattle had to be specially reported at the time of their outbreak.

The Miscellaneous Reports covered a very wide range of subjects, from the paper industry of Japan to the sea fisheries of Germany. From time to time Consuls have reported on such matters as Japanese paper mills; the arms industry of Liège; the German paper industry; the chemical, metal, and other industries of Lyons; the condition of the Italian silk trade; the coal industry of the United States; and on commercial instruction in Germany. These formed a valuable addition to our commercial intelligence. With a view to improve the quality of Consular Reports generally, it was arranged between the Board of Trade and the Foreign Office that newly appointed consular officers, before proceeding to their station, should attend for a short period at the Department of Overseas Trade (see COMMERCIAL INTELLIGENCE), 35 Old Queen Street, S.W.1, in order to become acquainted with the kind of information needed by business men. Consuls were also required to send important items of commercial information home without delay, by telegraph if necessary. Cases of urgency included information as to important contracts offered for tender, and important shipping movements or dock strikes in foreign ports. For an account of the methods adopted to secure the prompt transmission of such information to commercial men see under COMMERCIAL INTELLIGENCE.

A complete index to the Reports was published annually down to 1916, when publication of Consular Reports ceased. Consular officers are still required to report on the lines indicated above, but such reports have not been published since 1916.

A new series limited to the more important countries, and known as "Economic and Industrial Reports" (*q.v.*), has been substituted therefor. T. G. G.

CONSULS, BRITISH, DUTIES OF. A British Consul is required to advise H.M.'s trading subjects and others in his district, to avert and compose differences among them, or between them and the natives of the country, to check the evasion of local revenue laws by British traders, to uphold the treaty rights of British subjects in a temperate manner, to report on the trade of his district, and to send home promptly items of important commercial information.

Births and deaths occurring among British subjects are registered by him, and some Consuls are also empowered to celebrate marriages.

He may grant certificates of naturalisation to aliens and issue passports to British subjects. He may also advance for the erection or upkeep of Anglican churches, hospitals, and places of interment, sums equal to the amounts subscribed for the purpose by British subjects.

A Consul's duties with regard to British shipping are very important. Consuls are bound to send to the Board of Trade such reports and returns as they may require, and to see that all British vessels carry the documents and colours prescribed by law, and he may grant terminable and provisional certificates of registry as British ships.

If a Consul suspects that the shipping laws are being evaded, he may require the production of the official log-book or other ship documents, muster the crew, and demand explanations with regard thereto.

Every British ship not carrying passengers on entering a port must deposit with the Consul the agreement with the crew, indentures, etc.

The Consul superintends the engagement and discharge of British seamen abroad, investigates complaints made by crews as to the quality and quantity of the provisions on board, collects the property and arrears of wages, if any, of British seamen or apprentices dying abroad and remits them to the United Kingdom, and provides, out of public funds, for the maintenance and repatriation of seamen who are shipwrecked, discharged, or left behind. He issues money orders to seamen, receives deposits and pays withdrawals from the Seamen's Savings Bank, and conducts, at certain ports, the transmission of seamen's wages home.

Masters of passenger vessels are bound to give the Consul facilities for the inspection of the ship and the passenger list, and for communication with the passengers. The Consul may defray costs of maintaining and forwarding to their destination passengers taken off or picked up from wrecked or injured vessels.

The Consul makes inquiry on oath into offences committed by British seamen on the high seas or abroad ashore, and may send home the offender and witnesses by a British ship, at the same time reporting the facts to the Board of Trade.

He may detain a foreign ship which has caused injury to a British vessel until satisfaction or security therefor has been given, and when a salvage claim is made against a British vessel he takes evidence as to the services rendered and the remuneration claimed, and endeavours to effect a settlement.

Much notarial business is imposed on Consuls, partly by statute and partly by the request of private parties, and consists largely in taking declarations relating to the registry, sale, mortgage, etc., of British vessels, and to other commercial matters.

In China, Siam, Egypt, Persia, etc., British consular officers exercise extensive judicial and executive powers in connection with the consular courts established in those countries.

T. G. G.

CONVERSION OF BRITISH NATIONAL DEBT.* The Government borrowings to finance the War were on an altogether unprecedented scale, and in the course of the War a number of different forms of borrowing were tried with a varying degree of success. With the increasing demand for new loans and the less favourable rates obtaining, there was little to encourage the Government to enter upon conversion operations, and in so far as such operations were undertaken the object was mainly to postpone repayment of the capital amounts outstanding. The total debt of Great Britain at 31st March 1923 stood at £7,742,233,286, inclusive of the estimated capital liability in respect of terminable annuities, £11,015,100 owing to the Bank of England, and £2,630,769 owing to the Bank of Ireland. However, certain conversions were effected, of which the following are the principal. About £255,000,000 Consolidated stock 2½ per cent, £137,470,000 3½ per cent War Loan 1925-1928, £8,000,000 Annuities 2½ per cent, and £1,000,000 Annuities 2¾ per cent were converted into 4½ per cent War Loan 1925-1945 under an option offered to subscribers to that issue in 1915. When £5 per cent War Loan 1929-1947 and £4 per cent War Loan 1929-1947 were issued in 1917, an option to convert was given to holders of 4½ per cent War Loan 1925-1945, 5 per cent Exchequer Bonds 1919, 1920, and 1921, and 6 per cent Exchequer Bonds 1920, and 97·5 per cent, 61·9 per cent, and 12·9 per cent respectively were converted into the new War Loans. In June 1919 an issue was made of 4 per cent Funding Loan 1960-1990, and of 4 per cent Victory Bonds, and an opportunity to convert was given to holders of 4½ per cent War Loan 1925-1945, 5 per cent Exchequer Bonds, 1919, 1920, 1921, and 1922, 6 per cent Exchequer Bonds 1920, 4 per cent National War Bonds, 1st, 2nd, and 3rd Series, and 5 per cent National War Bonds, 1st, 2nd, and 3rd Series, with the result that £120,617,000 was converted into Funding Loan and £72,203,000 into

Victory Bonds. In April 1921 the Chancellor, seeing no immediate prospect of being able to fund the greater part of the existing floating debt, and desiring to avoid its increase or even a delay in its reduction as a result of the issue of Treasury Bills to meet maturing bonds, proposed to holders of 5 per cent National War Bonds due on or before September 1925 that they should convert their holdings into 3½ per cent Conversion Loan redeemable at the earliest in 1961. The terms were considered at the time far too generous, though in the long run effecting a saving to the taxpayer. The result, however, was disappointing, the total face value of the bonds converted being £163,328,133. In July of the same year holders of 5 per cent Exchequer Bonds due October 1921, and of 5 per cent National War Bonds due October 1922, April or September 1923, were invited to convert their holdings into a longer-dated loan of 5½ per cent Treasury Bonds repayable in 1929, and bonds of the approximate face value of £89,000,000 were converted.

At the beginning of April 1924 a further conversion operation was undertaken. In announcing its intention to convert £200,000,000 of 5 per cent War Loan 1929-1947 into a new loan bearing interest at the lower rate of 4½ per cent and repayable 1940-1944, the Treasury had a close and economical regard to the investment situation. Owing to the fact that interest on the War Loan is paid without deduction of tax at the source, whereas the interest on the new loan will be taxed at source, the operation was not expected to make a strong appeal to small holders. On the other hand, the yield of nearly 4¾ per cent for sixteen years certain, instead of a yield of just under 5 per cent for a certain period of not more than five years, appealed strongly to those interests which had to take into account the probable tendency of interest rates over the longer period. The operation resulted in the conversion of nearly £150,000,000 of War Loan, which may be regarded as a most successful result.

During the course of the War the Government was forced to raise large sums abroad, with the result that on 31st March 1923 the external debt amounted to £1,155,653,503. In the main this money was borrowed from the United States of America, and the desirability of converting these demand obligations into long-dated securities resulted in 1923 in an agreement between the respective Governments for the funding of our debt to the United States. Bonds to the principal amount of $4,600,000,000 were issued dated 15th December 1922 and maturing 15th December 1984, with interest payable half-yearly at the rate of 3 per cent per annum from 15th December 1922 to 15th December 1932, and thereafter at the rate of 3½ per cent per annum until the principal should be repaid. The agreement provides for the repayment of the principal sum by annual instalments, steadily increasing in amount from $23,800,000 in 1923 to $175,000,000 in 1984.

[For details of the conversion operations affecting the Internal Debt, see Kirkaldy, *British Finance, 1914-1921* (London, 1921), and *Stock Exchange Year Book*. For the funding of the American Debt, see Cmd. 1912 (1923).] F. W. G.

COPARTNERSHIP. *Labour and Capital.* The Copartnership system of the South Metropolitan Gas Co. (see TRADE UNIONS AND STRIKES) is one of the largest systems of this class in the United Kingdom. As an example of the general working of Copartnership principles we will explain how this system grew up out of the plan of profit-sharing in force in that company since 1889. In that year simple PROFIT-SHARING (*q.v.*) was introduced to attach the employees to the company, and to give them an opportunity to improve their position in life and to make provision for the future. The whole bonus was payable in cash on a week's notice, but nearly half was left with the company at interest, and a small portion invested in the company's ordinary stock. In 1894 the bonus was increased on condition that only one-half should be withdrawable, the other half invested in the company's ordinary stock. Thus shareholding by employees was established. The system was revised in 1901, and became so popular that in 1912, with a bonus amounting to £45,350, the sum invested in the stock of the company was £48,289, the value of these investments being over £380,000, with deposits at interest over £54,000 and £57,500, invested in the purchase of houses—the total being £491,000. In 1896 and 1897 Acts of Parliament were passed to enable employee shareholders to elect directors, and in 1901 the scheme for the election of workmen directors having proved satisfactory it was renewed for nine years, and provision made for the election of a director by the officers. These directors are elected by the employee shareholders whose stock is held in their own names, besides those whose stock is in the names of the trustees. When the question of employee directors was first considered there was the fear that they might take a narrow view of their duties. The directors and shareholders of the Metropolitan Gas Co. took that risk, and have no cause to regret their action. Copartnership, as Sir George Livesey said, is neither philanthropy nor charity, but business. It is "Business up to date,"—the foremost and best method of uniting capital and labour. He continued, "The directors would not be justified in continuing the copartnership if an equivalent in hearty service is not given for the bonus, which must

not be regarded as a gift to the employees," but that every man "is responsible for earning his share of the bonus."

Copartnership was established because the term "Profit-sharing" did not truly express the predominating idea of the system, and also because simple profit-sharing—the distribution of an annual bonus in cash—has been found to do more harm than good. Instead of encouraging thrift it did the reverse; it encouraged waste and extravagance. Unless any system permanently benefits, no good can be done. By investing the bonus in the stock of the company the position of the workman is improved. He becomes an owner of property, and has hope for the future and a feeling of security in the present. Sir George Livesey continues: "Partners in profits and losses and in responsibility is what we are aiming at. The last is obtained by the election of employee directors by the employee shareholders. In 1898 the workmen shareholders elected two workmen directors, and in 1901 the clerical shareholding staff elected a clerk as a director. These three sit on the Board, and take part in everything that comes before the Board just the same as the ordinary directors, with all-round satisfaction." The South Suburban Gas Co. (formerly the Crystal Palace District) have had an exactly similar and equally successful system in force since 1893, and in 1905 workmen directors were introduced, the choice of the men being the best possible, as in the case of the South Metropolitan. The Commercial Gas Co. introduced a similar system in 1901, and since then more than thirty gas companies, including the Gas Light and Coke Company and the Liverpool United Gas Light Company, have introduced the system also with success, but they stop at the investment of the bonus in stock.

Schloss, D. F., *Report on Profit-Sharing*, Bd. of Trade (Labour Dep.) [C. 7458], 1894.—*Report on "Gain-Sharing,"* Bd. of Trade (Labour Dep.) [C. 7848], 1895.—Sir George Livesey, *Employers and Employed and Co-Partnership.* (South Metropolitan Gas Company.) London: Walter King. Much information will be found in *Copartnership in Industry* by Charles Carpenter. London: Copartnership Publishers, Ltd., who also publish *Facts and Suggestions as to the Introduction of Co-partnership into Established Businesses by a Better Way*, Aneurin Williams, and the *Co-partnership Journal*; see also *Report on Profit-Sharing and Labour Co-Partnership in the United Kingdom*, Bd. of Trade, 1913.

Between 1829 and 1912, 299 profit-sharing schemes of all kinds were established, *i.e.* 204 between 1829 and 1900, of which 150 failed; 95 between 1901 and 1912, of which only 13 failed. The distribution of the 133 schemes in operation at the end of 1912 is as follows:—

	No. of Businesses.	No. of Employees.
Building, woodworking, and furnishing	6	320
Engineering, metal, and shipbuilding	5	17,499
Textile and clothing . .	12	6,588
Printing and paper . . .	15	4,183
Transport	1	173
Agriculture	6	737
Chemical, glass, pottery, etc. .	14	15,649
Food and tobacco . . .	13	6,760
Gas works	33	28,246
Electricity supply . . .	2	414
Other businesses . . .	26	25,620
Total . .	133	106,189

COSSA, Luigi (1831-1896), born in Milan, professor of Political Economy at the University of Pavia from 1858 till his death, was an economist to whom Italy is greatly indebted. He was educated at the University of Milan and in Germany under Roscher and Stein, the former of whom influenced him strongly.

He was an indefatigable and ardent student of economic literature both past and present, both of Italian economists and those of other nations. The results of his studies are to be seen in his works, which are truly described as "noteworthy for the vast learning they contain, sobriety of expression, and temperateness and accuracy of method." His books have been translated into many languages, and one in particular, the *Introduction to the Study of Political Economy*, may be ranked as a classic.

Though it is by his books that Cossa is known to the world in general, it was by his personal influence as a teacher and a leader that he was valued in Italy. He was not only a brilliant and careful lecturer, but was always ready to help and encourage his pupils, inspiring them and exhorting them to labour. Though himself an adherent of the classical school, his sympathies were extended to all honest and industrious students no matter what method of thought they might have selected to follow. His principal works are:—

Guida allo studio dell' economia politica, Milan, 1st ed. 1876. Eng. trans. *Introduction to the Study of Political Economy*, 1892.—*Primi elementi di economia politica*, Milan, 1st ed. 1876. — *Primi elementi di scienza delle finanze.* — *Saggi di economia politica*, Milan, 1st ed. 1878.

[See *Economic Journal*, vol. vi., London, 1896.—*Handwörterbuch der Staatswissenschaften*, giving complete list of writings, vol. iii., Jena, 1900.]

COTTERILL, Charles Foster (earlier half of 18th century), criticised the theories of Ricardo in his *Examination of the Doctrines of Value.* He followed the arguments of Samuel Bailey (*q.v.*), and opposes to the labour theory the cost of production theory of value.

The full title of his book is *An Examination of the Doctrines of Value as set forth by Adam Smith, Ricardo, M'Culloch, Mill, the author of A Critical Dissertation, etc., Torrens, Malthus, Say, etc., being a Reply to those Distinguished Authors*, London, 1831. [See Prof. Seligman "On some Neglected British Economists" in *Econ. Journ.*, Lond., 1903.]

COURCELLE-SENEUIL, JEAN GUSTAVE (1813-1892), was born at Seneuil, Dordogne, on 22nd December 1813. He at first was engaged in business, and then for a short period in 1848 was Director of Estates in the French Ministry of Finance. He subsequently devoted himself to the study of Political Economy, and was appointed Professor at Santiago, Chile, where he remained for ten years (1853-63). He then returned to France, and in 1879 he was nominated Councillor of State. In 1882 he was elected a member of the Académie des Sciences morales et politiques. In addition to his general work on Political Economy he published various treatises on banking. He wrote several articles in the Political Dictionary of Pagnerre, and the article "Charles Fourier" in the *Dictionary of Political Economy* (1851).

His works include: *Le Crédit et la banque* (Paris, 1840); *Traité théorique et pratique des opérations de banque* (1853; 9th edition, 1904); *Manuel des affaires, ou traité théorique et pratique des entreprises industrielles commerciales et agricoles* (1856); *Traité théorique et pratique d'économie politique* (2 vols., 1858-9); *Études sur la science sociale* (1862); *Leçons élémentaires d'économie politique* (1864); *Traité sommaire d'économie politique* (1865); *La Banque libre, exposé des fonctions du commerce de banque et de son application à l'agriculture* (1867); *Cours de comptabilité* (4 vols., 1867); *L'Intérêt et l'usure* (1867); *Liberté et socialisme* (1868); *L'Héritage de la révolution* (1871); *Précis de morale rationnelle* (1879); *Protection et libre échange* (1879); *Préparation à l'étude du droit: étude des principes* (1887); *Adam Smith* (1888); *La Societé moderne: étude morale et politique* (1892). He also contributed several articles to periodicals and newspapers.

E. L. H.

COURTNEY, LEONARD HENRY BARON (1832-1918), was born at Penzance on 6th July 1832. He was educated at St. John's College, Cambridge, was second wrangler and Smith's prizeman, and in 1856 became a fellow of his college. He then left for London to study law and was called to the bar in 1858. In 1860 he wrote a pamphlet on "Direct Taxation," in which he attacked MILL and BABBAGE and maintained that capitalisation was the only fair method of assessment for direct taxation. In 1864 he became a member of the staff of *The Times*. He joined the Statistical Society at this time, and five years later was elected to the Political Economy Club. He belonged to the group of Philosophic Radicals, and his economic standpoint was that of the individualist. His friendship with FAWCETT was undoubtedly founded on and promoted by a similarity of outlook. From 1872 to 1875 he held the chair of Political Economy at University College, London. He stood for Liskeard as a Liberal and was defeated in 1874, but was returned as member in 1876. He spoke often in Parliament on Eastern and Colonial questions, and was at this period an ardent supporter of Gladstone. He became in turn Under-Secretary for the Home Department, Under-Secretary for the Colonies, and Secretary to the Treasury. He was interested in the enfranchisement of women and in proportional representation, and on finding that the Suffrage Bill of 1884 failed to take any account of Proportional Representation he resigned from the ministry. He opposed Gladstone's Home Rule Bill in 1885 and became a Liberal Unionist. In the following year he was elected Chairman of Committees in the House of Commons. He always maintained an independent attitude, and his estrangement from the Unionist party was completed by the opinions which he expressed in connection with the Boer War. He attacked the policy of Tariff Reform and supported the movement in favour of bimetallism. In 1906 he unsuccessfully contested the constituency of West Edinburgh. In 1913 he was created a peer. Courtney's contributions to Political Economy include a dissertation on the Finances of the United States during the years 1861 to 1867, which was read before the Statistical Society; also an article entitled "Bimetallism Once More" (*Nineteenth Century*, April 1893), in which he favoured the system of International Bimetallism. His chief political work is *The Working Constitution of the United Kingdom and its Outgrowths* (London, 1901). He served on several Royal Commissions dealing with political and economic questions. In 1883 he married Miss Catherine Potter, a sister of Mrs. Sidney Webb.

His writings include: *Direct Taxation: an Inquiry* (London, 1860); an article in the *Nineteenth Century* for April 1893, "Bimetallism Once More"; the article on "Finance, 1837-1887," in Ward's *Queen Victoria*; *The Regeneration of Parliaments* (1905), reprinted from the *Contemporary Review*; *The Working Constitution of the United Kingdom and its Outgrowths* (London, 1901); *Peace or War?* (1910), reprinted from the *Contemporary Review*.

E. L. H.

CRAIG, JOHN.* In addition to the notice of Craig earlier in this volume, we may mention that his *Elements of Political Science* contains an exposition of the futility of Adam SMITH's distinction between productive and unproductive labour. Craig never accepted the fundamental tenets of the economics of RICARDO. He does not believe that wages are fixed by the standard

of life, and he is "opposed to the doctrine that wages and profits must vary inversely to each other." "Craig is the first English economist to emphasise the connection between value and utility, to disclose the fallacy of the supposedly necessary opposition between profits and wages, and to dwell on the analogy between the revenue from land and from capital." [See *Econ. Journ.*, London, 1903.]

CUNNINGHAM, WILLIAM, born at Edinburgh, 1849, died at Cambridge, 1919. His father was a Writer to the Signet in Edinburgh, and he was named after Colonel William Cunningham, who had served under Wellington in India. His mother descended from William Dunlop, a celebrated Principal of Glasgow University in the reign of William III. Cunningham was educated at the Edinburgh Institution, the Edinburgh Academy, and Edinburgh University. Thereafter he studied at Tübingen, and then entered at Caius College, Cambridge. There he read Philosophy and came under the influence of MAURICE and SIDGWICK. He obtained a first-class in the Moral Sciences Tripos in 1872, being bracketed "Senior" with F. W. Maitland. Failing to find a career in Philosophy, he was ordained by the Bishop of Ely in 1873, becoming curate of Horningsea, a parish some five miles from Cambridge, and later chaplain of Trinity, and curate of Great St. Mary's Church. During the period 1872-1881 he had become increasingly interested in economic and social questions. Through his appointment as examiner in the History Tripos he became aware of the need for teaching of economic history at Cambridge, and he undertook this work. That resulted in the publication of *The Growth of English Industry and Commerce*, the first edition of which appeared in 1882. During the next twenty-five years he continued his studies in this subject, adding to his book in successive editions, besides publishing a number of separate volumes which might be described as great appendices to the main work; *e.g. Christian Opinion on Usury*, 1884; *Alien Immigrants*, 1897; *Western Civilisation*, 1898, 1900; *Progress of Capitalism*, 1916. In addition, he had taken a prominent share in the University Extension movement, and attended many co-operative and labour congresses, as for instance in 1874, 1877, 1879. Also he had begun to widen his outlook by travel, having visited India in 1881-2. Probably he was the most travelled economist of his generation. In later years he journeyed through Europe, the United States, South Africa, and the Holy Land.

After being Birkbeck and Hulsean Lecturer, he was appointed vicar of Great St. Mary's, Cambridge, in 1887. He was an active vicar, but at the same time, as his list of publications shows, he continued his historical studies. In 1891 he was elected Tooke Professor of Economics and Statistics at King's College, London, an appointment which he held till 1897. During this period he was elected a Fellow of Trinity College, Cambridge, and in 1900 he served as Lecturer in Economic History at Harvard University, and fourteen years later he returned to the United States as Lowell Lecturer.

To some extent his general position as to the scope and method of economic inquiry, but probably to a larger degree his travels, made him keenly interested in the tariff issue, raised by Joseph Chamberlain in 1903, and for the next seven years he was a vigorous controversialist in favour of the policy of "fiscal reform." In addition to a number of articles in the press, he published *Failure of Free Traders to attain their Ideal*, 1903; *Rise and Decline of the Free Trade Movement*, 1906; *Wisdom of the Wise*, 1906; and *The Case against Free Trade*, 1910.

In 1907 he was appointed Archdeacon of Ely. The activities which had been devoted since 1887 to his work as vicar were now diverted to new tasks, and his position in the Church called for several works, though he still maintained his interest in economic history. To this side of his life belong *The Moral Witness of the Church on the Investment and Use of Wealth*, 1909; *Christianity and Social Questions*, 1910; *Causes of Labour Unrest*, 1912; *Christianity and Economic Science*, 1914; *Christianity and Politics*, 1916.

After being president of the Historical Society in 1911, and having completed the MS. of *The Progress of Capitalism*, he regarded his historical work as being closed, and proposed to turn his attention to Philosophy in its relation to Theology. He had already begun to contribute articles on F. D. Maurice to the *Ely Diocesan Gazette*, and just before his death was thinking of writing a life of Maurice.

Cunningham was an Hon. Fellow of Caius College, and one of the original Fellows of the British Academy. He attended most of the meetings of the British Association during a period of more than thirty years. As far back as 1883 he was Secretary of the Economic Section, of which he was President in 1891 and again in 1905. He was prominent in the founding of the Royal Economic Society, and his interest in women's education, and especially in the Women's Colleges at Cambridge, was great. The establishment of the Girton series of monographs was due to his liberality. It shows the width of his interests that he became associated with the Freemasons, in which body he was Grand Chaplain of England.

This condensed record of Cunningham's life suffices to show his many-sided activities and his tremendous power of work in varied fields. It does not, however, make sufficiently prominent another side of his character. He was most intensely interested in life; he was always learning everywhere; he was devoted in friend-

ship and had the power of inspiring others to do original work. Thus he may be said to have formed a school, in the sense of having established definitely a new subject of study and having secured others to follow after him.

It would be easy to explain in general terms the new impetus which Cunningham imparted to the study of economic phenomena in this country; but behind the mere fact is the significance and the meaning of the movement as far as that can be discerned at the present time. As regards the first, though there were creditable histories of special economic and social activities, at the beginning of the third quarter of the nineteenth century there was no good general history of the subject. The historical writing of J. R. M'Culloch and, to a less degree, that of Levi was revolting to any one with a historic sense, since they both judged the past according to principles arrived at by a previous study of economic theory. Valuable as is Thorold Rogers' monumental *History of Agriculture and Prices*, he wrote rather as a politician than as a scholar. Then, too, it was curious that in his overemphasis on the economic side of history he, as it were, transplanted the conception of "the economic man" from the analysis of economic phenomena to the history of these. Cunningham differed altogether from his predecessors in his objectivity and insight. When he wrote about a period he seemed to have the capacity of living in it, and appreciating the point of view of those who were actors in far-distant times—"he was like the great dramatist who cannot be identified with any of the characters he creates." As Cunningham himself says, "he set himself to show how intimately the political and the economic history of the English nation have been interconnected, and to describe and account for the actual course of the material progress of the country." "Viewed in this way," in the words of Professor Foxwell, "economic history appears as one great concerted development, with something of the epic character." Cunningham's "real ancestry is to be found in such men as the author of the *Libelle of English Polycye*, as Thomas Mun and William Petty, and, above all, in the spirit that inspired Shakespeare and the great Elizabethans" (*Economic Journal*, xxix. p. 385). Yet Cunningham never attempted to write history in what is called the grand manner. His work is singularly devoid of "purple patches" and of epigrams—so often a self-set trap to catch the author himself. Rather he contented himself by telling a plain straightforward tale, but documented to the fullest extent. Then, as his *Growth of English Industry and Commerce* expanded, he added striking sayings collected from the writers of long ago, which gave added life and vividness to the whole narrative. To the completed work it is appropriate to apply his own generous words, used of another, "we should indeed be wrong if we forgot that the great stimulus came from the exhaustiveness of his monumental work and the inspiring influence of his example . . . ; if we can press a little further than he did, it is only because his genius opened up the way."

Cunningham thus placed the study of economic history in this country upon a firm foundation. He secured the co-operation of enthusiastic students of the subject. In his lifetime he had the gratification of seeing it incorporated into the curricula of the universities, and still more in finding that analytical economists were availing themselves of historical evidence in all cases where it helped to elucidate their inquiries. Even in the reports of Royal Commissions the same tendency is now firmly established.

This result was both less and more than that at which Cunningham aimed. It was more than what he can have expected in the eighties of last century, when the first edition of the *Growth of English Industry and Commerce* appeared. It was less in so far as it left the relationship of theory and history still undetermined. The views of Cunningham on the exact point of contact between economic analysis and economic history are nowhere clearly on record, though he often discussed this question in conversation. It is clear he did not believe in theory or abstract economics. In his inaugural lecture at King's College, London (1891), he insisted on the relativity of economic doctrine. An economic conclusion is "at best more or less generally true; it is never universally true" (*Economic Journal*, ii. p. 3). "Political economy does not give us definite information as to controlling necessities which human action cannot modify or direct, and which therefore limit human powers of righting any given wrong." Failing specific data, it is only possible to conjecture the chief lines of thought which led him to this conclusion. He was greatly, and no doubt unduly, impressed by some of the erroneous predictions from economic laws of certain of the later members of the Classical School. He contrasted the Absolute at which Philosophy aimed, and the universality which Science, in his day, claimed, with the limitations to which most economic reasoning is subject. Then, too, he was influenced by the trend of the German Historical School, though, later, he diverged from it, establishing his own work as essentially British. Finally, his point of view as a Churchman must be taken into account. Here he had a certain affinity with the schoolmen. He regarded Political Economy as a study of means towards the attainment of an ideal which is determined by religion or Ethics (*Economic Journal*, ii. p. 15). Therefore he was averse to the separation of economic phenomena as an isolated field of study, believing that, starting from the basis of economic motives, the ultimate reconciliation with the rest of man's nature (which was required

to reach a final result) was rarely made. It was for these reasons that he distrusted analytical economics, though he gives but slight hints as to what is to be put in its place. Possibly the clearest conception of Cunningham's position is to be gained from a saying of W. S. Jevons, who describes (*State in Relation to Labour*, 1882, p. 29) the legislator as gathering to a focus the complex calculus of probabilities supplied by the scientist, the physicist, the economist, the moralist. Cunningham was too many-sided to be content to be an earnest economist in the narrow sense. He was rather like the "legislator" of Jevons who wanted to see the totality of social experience, and what resulted from it, and how its evils can be remedied.

[*Growth of English Industry and Commerce*, 1882 (and subsequent editions), 1892, 1896, 1903, 1905, 1907, 1910; (with Dr. E. A. MacArthur) *Outlines of English Industrial History*, 1895, 1904, 1910, 1913; *Christian Opinion on Usury*, 1884; *Politics and Economics*, 1885; *Alternative to Socialism*, 1885; *Political Economy treated as an Empirical Science*, 1887; *The Path towards Knowledge*, 1891; *Progress of Economic Doctrine in England in the Eighteenth Century*, 1891 (*Economic Journal*, vol. i.); *Use and Abuse of Money*, 1891; *Relativity of Economic Doctrine*, 1892 (*Economic Journal*, vol. ii.); *Dr. Cunningham and his Critics*, 1894 (*Economic Journal*, vol. iv.); *Modern Civilisation in some of its Economic Aspects*, 1896; *Alien Immigrants to England*, 1897; *Essay on Western Civilisation in its Economic Aspects in Ancient Times*, 1898; *Essay on Western Civilisation in its Economic Aspects in Modern Times*, 1900; *The Gospel of Work*, 1902; *Economic Change*, 1902 (*Cambridge Mod. Hist.* vol. i.); *Failure of Free Traders to attain their Ideals* (*Econ. Rev.* xiv.); *Rise and Decline of the Free Trade Movement*, 1904; *Wisdom of the Wise*, 1906; *Moral Witness of the Church on the Investment of Wealth*, 1909; *Early Writings on Politics and Economics*, 1909 (*Cambridge Hist. of English Lit.* vol. iv.); *Free Trade*, 1910 (*Encyclopædia Brit.*); *The Case against Free Trade*, 1910; *Common Rights at Cottenham and Stretham*, 1910; *Christianity and Social Questions*, 1910; *Organisation of the Mason's Craft in England*, 1913 (*Trans. British Academy*, vol. iv.); *Causes of Labour Unrest*, 1912; *Christianity and Economic Science*, 1914; *English Influence on the United States*, 1916; *Progress of Capitalism in England* (which contains a Bibliography of Cunningham's writings on economics and allied subjects), 1916; *Christianity and Politics*, 1916; *The Common Weal*, 1917; *Increase of True Religion*, 1917; *The Secret of Progress*, 1918.—Cf. H. S. Foxwell, *Archdeacon Cunningham.*—L. Knowles, *Dr. Cunningham* (in *Economic Journal*, vol. xxix.).—W. R. Scott, *William Cunningham, 1849-1919* (*Trans. British Academy*, vol. ix.).] W. R. S.

CURRENCY (OR TREASURY) NOTES were first issued in this country as the result, not of deliberate and well-studied policy on the part of the Government, but as an emergency measure immediately following the outbreak of war in 1914. For an account of the events which led up to the passing of the Currency and Bank Notes Act, see Drain of Bullion, App. This Act authorised the Treasury to issue currency notes for £1 and 10s. as legal tender for any amount. Clause 3 of Section I. provided that the holder of a currency note is entitled to obtain on demand at the Bank of England payment of the note at its face value in gold coin. No statement to such effect has, however, been printed on any of the notes so far issued, and it may be said that in general the public are ignorant of this provision. At first opinions were freely expressed that the issue of currency notes would have been rendered unnecessary had the banks continued to pay out gold as formerly. However, the great expansion in bank credit, rapidly increasing commodity prices and wages, prove that, sooner or later, an issue of currency notes would have had to be made. The outstanding issue of notes grew rapidly and continuously until the year 1920, and was assisted by the withdrawal of gold from circulation. Recognised banks were permitted to borrow currency notes through the Bank of England to an amount not exceeding 20 per cent of their liabilities on current and deposit accounts, the security being a floating charge on the bank's assets bearing interest from day to day at the current Bank Rate. This provision was withdrawn in December 1919, following the final report of the Committee on Currency and Foreign Exchanges after the War. The banks took nearly £13,000,000 in the initial stages of the crisis, but this amount was speedily reduced, and on 25th November 1914 only £239,000 remained outstanding. Since currency notes were first issued on 7th August 1914 their design has been changed twice. The number of forged notes discovered has not been great, considering the large amount of notes in circulation. In addition to the notes, Currency Notes Certificates are issued which entitle the holder, usually a bank, to demand from the Bank of England the amount of currency notes stated thereon.

A return showing the amount of currency notes outstanding and the composition of the Currency Note Redemption Account is published weekly as follows:—

CURRENCY NOTES.

(4 & 5 Geo. V., cc. 14 and 72.)

I.—ISSUE ACCOUNT.

Total issued up to 23rd January 1924 inclusive—

£1 Notes	£2,270,077,549	0	0
10s. Notes	631,642,341	10	0
Currency Notes Certificates	177,540,000	0	0

Issued during the week ended 30th January 1924—			
£1 Notes		£6,172,520 0 0	
10s. Notes		1,499,457 10 0	
Currency Notes Certificates		50,000 0 0	
TOTAL		£3,086,981,868 0 0	
Total cancelled or called in up to 23rd January 1924 inclusive—			
£1 Notes	£2,051,778,411 0 0		
10s. Notes	591,601,551 10 0		
Currency Notes Certificates	158,390,000 0 0		
Cancelled or called in during the week ended 30th January 1924—			
£1 Notes	5,179,053 0 0		
10s. Notes	1,362,088 10 0		
Currency Notes Certificates	190,000 0 0		
TOTAL		£2,808,501,104 0 0	
Outstanding—			
£1 Notes	219,292,605 0 0		
10s. Notes	40,178,159 0 0		
Currency Notes Certificates	19,010,000 0 0		
		278,480,764 0 0	
TOTAL		£3,086,981,868 0 0	

II.—BALANCE-SHEET.

Notes outstanding		£259,470,764 0 0	
Certificates outstanding		19,010,000 0 0	
Notes called in but not yet cancelled		1,422,892 10 0	
Investments Reserve Account		11,768,920 18 8	
TOTAL		£291,672,577 8 8	
Currency Note Redemption Account—			
Bank of England Notes		£22,450,000 0 0	
Gold Coin and Bullion		27,000,000 0 0	
Silver Coin		7,000,000 0 0	
Government Securities		235,097,506 2 3	
Balance at the Bank of England		125,071 6 5	
TOTAL		£291,672,577 8 8	

N. F. WARREN FISHER,
Secretary to the Treasury.

TREASURY CHAMBERS,
31*st January* 1924.

On 15th December 1919 the Chancellor of the Exchequer announced the intention of the Government to give effect to the recommendation of the Committee mentioned above that the actual maximum fiduciary circulation of currency notes in any one calendar year should be fixed as the legal maximum for the next. The subsequent trade depression has resulted in a natural reduction in the demand for currency notes, so that up to the present the Government has not been called upon to stand by this deflationary measure. Fears have, however, been expressed that with a revival of trade and the consequent demand for additional currency, the Government would be forced to consider afresh the advisability of adhering to this decision, made at a time when trade was good and prices were still rising.

[For further particulars of the currency note issue and the Reports of the Committee on Currency and Foreign Exchanges after the War, see Kirkaldy, *British Finance, 1914-1921* (London, 1921).]

F. W. G.

CURVES.* Curves of the kind introduced by COURNOT to represent the laws of supply and demand have now obtained an assured position in economic literature. Even De Foville, who generally directed his polished wit against the use of mathematics in Political Economy, admitted those simple curves. But it may be doubted whether the supply curve adapted to represent changes in the organisation of industry during long periods is equally suitable for general use. Of still more doubtful use is the analogous conception of a demand curve purporting to represent the *increase* of the demand price with the increase of the quantity offered for sale. This conception, due to Mr. Henry Cunynghame, is considered in a review of his *Geometrical Political Economy* in the *Economic Journal*, 1905. There is reference in the context to Mr. Cunynghame's important views on the issue between curves and symbols which is noticed in the above article. Even more complicated than Mr. Cunynghame's curves are the curves of "marginal supply price" and "marginal demand price" used by Professor Pigou in his *Wealth and Welfare* and *Economics of Welfare*. His constructions having been severely criticised in the *Economic Journal* (March 1924), Professor Pigou revised his treatment of the subject in the second edition of his *Economics of Welfare*.

F. Y. E.

DANSON, J. T. (1817-1898), a man of great versatility and varied experience, wrote on many economic questions, among them on our colonial policy, strongly setting forth the need of controlling colonists in their dealings with natives and with unappropriated land. He also wrote on our maritime trade both in peace and war, a subject he was conversant with through his connection as underwriter with the Thames and Mersey Marine Insurance Company. For a short time (1875-76) he lectured at Queen's College, Liverpool, on Political Economy—his lectures, almost homely in their simplicity, being published first as *Eleven Short Lectures on the Political Economy of Daily Life*, 1876, and afterwards forming the basis of one of his most important works, *The Wealth of Households*, 1886. Danson also assisted TOOKE in the fourth volume of the *History of Prices*, the help he gave being warmly acknowledged in the Preface to that volume. He practised for a time as a barrister, and

had some experience in journalistic work and in farming.

Danson also wrote on the accounts of the Bank of England, *Journal of Statistical Society*, 1847.—*Observations on the Speech of Sir William Molesworth on Colonial Expenditure and Government*, 1848.—*Notes on the Pilotage of the Port of Liverpool*, 1871.—*The Underwriting of 1872*, 1873.—*Of the proposed Legislation touching Maritime Contracts*, 1876.—*Underwriting in England, France, and America during the last three Years*, 1883.—*Underwriting of 1883-84 in England and Abroad*, 1885.—*Our next War in its Commercial Aspect; with some Account of the Premiums paid at Lloyd's from 1805 to 1816*, 1894.—*Our Commerce in War and how to protect it*, 1897.

DAVIDSON, John (died 1905), appointed professor of Political Economy in the University of New Brunswick, Canada, in 1892, was educated at the High School, and at the University of Edinburgh. He graduated M.A. in 1891 and D.Phil. in 1897. He first published *The Bargain Theory of Wages*, 1898, containing a criticism of the wage doctrines of the 19th century, and a statement of the theory which the author himself held. There are two limits to the value of labour, the superior limit (determined by the employer's estimate) and the inferior (determined by the labourer's estimate). These limits "are not absolutely fixed; but, within the undisputed and permanent frontiers, each is comparatively free from the danger of aggression." The exact rate between these limits at which wages will be fixed "is determined by the comparative strength of the bargainers." The mobility of labour, trade unionism, and the methods of industrial remuneration, are then examined as factors in the determination of this rate. In this section the author argues that immigration is a consequence rather than a cause of prosperity.

In his *Commercial Federation and Colonial Trade Policy* (1900), he describes England's commercial policy towards her colonies since the treaty of Paris, and examines the present commercial relations of the mother-country with the rest of the empire. He concludes that the two proposals, free trade within the empire, and preferential treatment for the Colonies in the English market, are impracticable. The English Government, however, should discriminate against the foreigner, and stimulate colonial trade by granting "subsidies to freight steamers running between England and colonial ports."

Professor Davidson also contributed articles to the *Economic Journal* on "Canadian Preferential Tariff," 1900, and "Financial Relations of Canada and Provinces," 1905. At the time of his death "he had almost completed a history of the Scottish staple, which, from the fulness of treatment, was practically an economic history of Scotland for the period covered." J. H. J.

DECLARATION OF LONDON, 1909. This embodies the conclusions reached by the Naval Conference 1908-9, which was directed mainly to a settlement of the rights and liabilities of neutral trade in time of war. The Declaration deals with blockade, contraband, unneutral service, destruction of neutral prizes, transfer to a neutral flag, enemy character, convoy, resistance to visit and search, compensation for unlawful seizure, and interpretation. The Declaration was to cease to be binding when in a war between contracting Powers one of the belligerents is joined by a non-contracting Power. In the main the provisions of the Declaration were merely declaratory of the existing law, but in some important subjects they were the result of compromise between conflicting practices which failed to stand the test of war. The signatories were Austria-Hungary, France, Germany, Great Britain, Italy, Japan, the Netherlands, Russia, Spain, and the United States. The Prize Court Bill to give effect to the Declaration was passed by the House of Commons but rejected by the Lords. It was consequently not ratified by any Power.

Arts. 1-21 provide that a blockade must be confined to the enemy ports and coasts and must not bar access to neutral ports and coasts; it must be effective; it must be declared and notified, and must be impartial. Capture can only be made within "the area of operations," which abrogates the Anglo-American rules that a vessel is liable to capture which sails from a neutral port with intent to violate a blockade, and that a vessel which has succeeded in breaking "blockade outwards" remains liable to capture until the termination of her voyage.

Under the name of absolute contraband Art. 22 sets out a list of articles which may without notice be treated as contraband of war. By Art. 23 articles used exclusively for war may be added to the list of absolute contraband by a declaration to be notified. Under the name of conditional contraband the articles specified therein which are susceptible of use in war as well as in peace may without notice be treated as conditional contraband. Other articles of a like nature may by Art. 25 be added to the list of conditional contraband by declarations to be notified. The articles not susceptible of use in war which are specified in Art. 27 may not be declared contraband. The Declaration further prescribes the conditions of liability for the carriage of absolute and conditional contraband; the effect of the carriage of contraband on the vessel and the non-contraband cargo; and the mitigations of the penalty under certain conditions.

Absolute contraband is liable to capture if destined to territory belonging to or occupied by the enemy. Here the destination of the goods is the test. Even if the vessel is bound

for a neutral port and the goods are discharged there, the latter will be liable if ultimately destined for the enemy territory. Here the doctrine of continuous voyage applies. The onus of proof lies on the captor, Arts. 30-32. Conditional contraband is only liable to capture if destined for the use of the armed forces or of a Government Department of the enemy. Such destination is presumed if the goods are consigned to an enemy contractor who notoriously supplies goods of like nature to the enemy or to a fortified place or base of operations belonging to the enemy. The doctrine of continuous voyage does not apply to conditional contraband, except where the enemy country has no seaboard, Arts. 33-36. A vessel remains liable to capture throughout the whole of her voyage, but when the voyage is concluded no further liability attaches, Arts. 37, 38. Contraband goods are liable to condemnation and the vessel carrying them also if by value, weight, volume or freight they form more than half the cargo, Arts. 39-40. If they form less the vessel may be allowed to continue her voyage upon handing over the contraband goods, Art. 44.

Unneutral service may be either partial or complete. By Art. 45 a neutral vessel engaged in carrying military persons or despatches concurrent with other employment of an innocent nature is liable to capture as if engaged in the carriage of contraband. By Art. 46 a neutral vessel in the exclusive service of the enemy—*e.g.* taking a direct part in the hostilities; acting under the orders or control of an agent placed on board by the enemy Government; in the exclusive employment of the enemy Government; or exclusively engaged in the transport of enemy troops or in the transmission of intelligence in the interest of the enemy—is to be treated as an enemy vessel. By Art. 47 individuals embodied in the armed forces of the enemy may be taken out of a neutral merchant vessel. By Art. 48 a neutral vessel may not be destroyed, but by Art. 49 she may be destroyed if she would have been liable to condemnation and her release would involve danger to the safety of the warship or to the success of its operations. By Art. 50, however, before destruction all persons on board must be placed in safety and all the ship's papers, etc., secured. As a general rule the transfer of an enemy vessel to a neutral flag, whether before or after the outbreak of the war, is valid unless shown to have been made to evade the consequences of war. If made before, the onus of proving it invalid lies on the captor; if made after, on the neutral, Arts. 55 and 56. In its application the general rule is subject to numerous subsidiary provisions.

The character of the vessel is determined by the flag she is entitled to fly and of the goods found on board an enemy vessel by the neutral or enemy character of the owner. In the absence of proof to the contrary they are presumed to be enemy goods, Arts. 506-7. Neutral vessels under convoy are exempt from search provided the commander of the convoy gives all the necessary information, Art. 61. Forcible resistance to visit and search entails condemnation of the vessel, and the cargo is liable to the same treatment as that of an enemy vessel, Art. 63. By Art. 64, if the vessel is not condemned or is released the parties interested are entitled to compensation unless there were good grounds for the capture.

Upon the outbreak of the War all the belligerents adopted the Declaration of London, but with important modifications. Great Britain and her Allies at once added to the list of absolute contraband contained in Art. 22, and as the War progressed enlarged it from time to time at the expense of Arts. 24 and 28. Indeed, the "Free List" contained in the latter practically disappeared. As was said, everything from a hundred-ton gun to a lady's garter had become contraband. Food-stuffs, however, remained in the British and German lists as conditional contraband. Great Britain continued to treat all fuel, except mineral oils, which she declared absolute, as conditional contraband, while Germany on the other hand treated coal, coke, and mineral oils as absolute and other fuel as conditional contraband. In 1916, coin, bullion, paper money, and negotiable instruments were declared by the Allies absolute contraband. They had already been so declared by Germany. Raw cotton was at first retained by the Allies on the "Free List," but as its prime importance for high explosives became recognised they eventually declared "raw cotton, linters, cotton waste, cotton yarns, cotton piece goods, and other products capable of being used in the manufacture of explosives," absolute contraband.

Cotton had already been declared absolute contraband by Germany. The articles enumerated in Art. 29, viz. for the use of the sick and wounded and for that of the vessel in which they are found, were treated as free by the Allies, but Germany regarded all armament, even for defensive purposes, as illegal. By the British and French Orders of 7th July 1916, whereby the Declaration of London was abandoned, all commodities directly or indirectly of use to the enemy in the prosecution of the War were declared absolute contraband. Germany by treating conditional contraband as absolute if destined to the enemy military forces, or to the central administrations, or to a port of supply, arrived at the same result. Every British port was treated as a base of supplies.

By this extension of the lists of contraband, combined with the application of the doctrine of continuous voyage, little was left of the rule "free ships, free goods," enunciated in the

Declarations of London and Paris. Although, for instance, conditional contraband by Art. 35 of the Declaration was not liable to capture if bound for a neutral port, it was by Order in Council, 29th October 1914, declared liable if consigned "to order," or if the ship's papers did not disclose the consignee, or if they disclosed a consignee in enemy territory. Art. 38 was modified by Orders in Council, 20th August and 29th October 1914, by which a neutral vessel which succeeded in carrying contraband by means of false papers might be captured on her return voyage, and a neutral vessel with papers indicating a neutral destination but which proceeds to an enemy port, might be captured if encountered before the end of her next voyage. The right to destroy neutral prizes, subject to prescribed conditions, was interpreted by the Germans as a right to sink at sight without any regard to the conditions or general humanitarian restrictions. By the withdrawal of the Declaration the customary rule that a neutral merchantman must in no circumstances be destroyed is restored.

[Pitt-Cobbett's *Leading Cases on International Law*, 4th ed., 1924, by Bellot.] H. H. L. B.

DEVAS, Charles Stanton (1848-1900), was educated at Eton and at Balliol College, Oxford, where he took first-class honours in Law and Modern History. He was Professor of Economics at Stonyhurst College. His works were written from the standpoint of Roman Catholicism, and dealt largely with the application of morality to political and economic questions. Thus he published in 1876 a pamphlet entitled *Labour and Capital from the Catholic point of view*, and in 1888 *Political Economy*, one of the manuals of Catholic Philosophy in the Stonyhurst Series. He also took part in current controversy by writing an introduction to Sir John Byles's *Sophisms of Free Trade* (1904).

His works include: *Labour and Capital in England from the Catholic point of view* (London, 1876); *Groundwork of Economics* (1888); *Political Economy* (1888); *The Meaning of Christian Democracy* (1899); *The Key to the World's Progress, being an Essay on Historical Logic* (1906). E. L. H.

DISEASES OF ANIMALS ACTS AND THEIR ADMINISTRATION. The first serious attempt by the State to control animal epidemics was embodied in the Contagious Diseases (Animals) Act, 1848, under which Sheep-Pox, then prevalent, and the great cattle-plague outbreaks of 1865-66 were dealt with. This Act and its amendments gave place to the Contagious Diseases (Animals) Act, 1869, which conferred extensive powers upon the Privy Council and upon local authorities to deal with animal diseases. Agricultural opinion was not, however, favourable to the full exercise of these powers, with the result that neither the Act nor the Orders thereunder were properly enforced. A revival of the movement in favour of more drastic measures for the suppression of animal epidemics, particularly foot-and-mouth disease, led to the replacement of the Act of 1869 by that of 1878, which formed the basis for the present legislation. The latter and its amendments were consolidated by the Diseases of Animals Act, 1894, and this, with its eight subsequent amending Acts, is still in operation.

The main principles and methods of working of the Acts of 1894 to 1922 are briefly as follows:

The Act of 1894 imposes upon the Ministry of Agriculture, as the central authority, the duty of devising and putting into operation measures for the control and eradication of contagious diseases amongst animals in Great Britain. It confers upon the Ministry wide powers to make Orders for these and other specified purposes, including the declaration of infected places and areas, the prohibition or regulation of movement of animals into, out of, or within such places or areas, or the exposure of animals at markets, etc., the control of the importation of foreign animals, and the protection of animals from unnecessary suffering during transit by land or sea. The Act requires the local authorities and the police to execute and enforce the provisions of the Act and of the Orders of the Ministry thereunder. The Local Authorities defined for the purposes of the Act, which number 330, are the County Councils, the County Borough Councils, and the Councils of certain other boroughs and burghs. All these are required to appoint their own veterinary and other inspectors to carry out the duties imposed upon them, and their expenses have to be defrayed out of the local rate.

The Act of 1896 amended the Act of 1894, so as to prohibit the importation of foreign animals except (*a*) for slaughter at the ports, and (*b*) for exhibition or other exceptional purposes subject to quarantine at the port of landing. The Orders of the Ministry under the Act of 1894 prohibit the importation of animals even for slaughter at the ports, from all countries except Canada, United States, South Africa, Ireland, the Channel Islands, and the Isle of Man.

The Act of 1903 empowers the Ministry to make Orders prescribing the periodical treatment of all sheep by effective dipping or some other remedy for sheep-scab.

The Act of 1909 requires the payment of fees to veterinary surgeons notifying cases or suspected cases of disease under any Order of the Ministry.

The Act of 1910 prohibits the export of horses unless examined by a veterinary inspector of the Ministry immediately before shipment and certified by him as fit to travel without suffering. This Act was extended by the *Exportation*

of Horses Act, 1914, which requires the veterinary inspector to certify that the horses must be capable not only to travel, but also to work without suffering. The effect is to prohibit the export of decrepit horses. The Exportation and Transit of Horses Order of 1921 regulates the traffic, requires the vessels engaged in it to be specially fitted, and makes provision for proper food, water, and attendance for the animals carried.

The Poultry Act, 1911, empowered the Ministry to make Orders for the protection of poultry from unnecessary suffering during transit. These powers have been exercised in the Conveyance of Live Poultry Order of 1919.

The Importation of Animals Act, 1922, provided for the importation of Canadian store cattle for feeding purposes in this country, subject to inspection at the ports and to a limited period of detention after arrival at the place of destination.

The following animal diseases are at the present time "scheduled" for administrative action under the Acts, viz. cattle-plague, contagious pleuro-pneumonia of cattle, foot-and-mouth disease, sheep-pox, swine-fever, sheep-scab, anthrax, rabies, glanders, epizootic lymphangitis, parasitic mange in equines, and bovine tuberculosis. The Tuberculosis Order, which was brought into operation for the first time in 1913, was suspended during the War, and remained suspended for reasons of economy at the date of this article (July 1924).

The above diseases may be divided into two classes: (*a*) those in which the diagnosis is in the hands of the Ministry's officers, namely, cattle-plague, pleuro-pneumonia, foot-and-mouth disease, sheep-pox, and swine-fever; and (*b*) those in which the diagnosis is carried out by officers of the local authorities, viz. anthrax, sheep-scab, glanders, rabies, epizootic lymphangitis, parasitic mange of equines, and bovine tuberculosis. In anthrax and rabies the diagnosis is subject to confirmation by the Ministry.

In cattle-plague and pleuro-pneumonia, the slaughter of affected animals is obligatory upon the Ministry, in sheep-pox upon the local authority. In foot-and-mouth disease slaughter is not obligatory, but may be carried out at the discretion of either the Ministry or the local authority. In swine-fever slaughter as a "stamping-out" policy was given a prolonged trial over many years at great expense, but without success. The attempt to stamp it out was abandoned in 1915 in favour of control, and slaughter is now only carried out where necessary to provide a means of diagnosis by post-mortem examination.

Of the diseases mentioned in class (*b*), slaughter is obligatory upon the local authority of affected animals in cases of glanders and bovine tuberculosis, and also of dogs and cats which are affected with or suspected of rabies or are known to have been bitten by a rabid dog. Remedial measures are applied to cases of sheep-scab and parasitic mange in equines. Anthrax in animals is practically always fatal, and slaughter is expressly avoided, as the spilling of the blood which swarms with anthrax bacilli is attended with great danger both to human beings and also to other animals. Cremation is the usual method of destruction of the carcases.

The above measures are accompanied by restrictions on the movement of the animals on the infected premises, with the object of preventing the spread of infection to other stock. Persons guilty of an offence in respect of these matters are liable to a penalty of £20, or £5 in respect of each animal where more than four animals are concerned, and in certain cases to imprisonment.

Where slaughter of any animals, except dogs and cats, is carried out by the Ministry or by local authorities, they are required to pay to the owner compensation. The amount of this varies with the disease and according to whether the animal is diseased or not. In view of the fact that the object of the provision made in the Act of 1894 for the payment of compensation is very frequently misinterpreted, it should be explained that compensation is not provided for the purpose of reimbursing an owner for losses incurred through outbreaks of disease amongst his stock; such losses are ordinary trade risks connected with the livestock industry, and are to a large extent insurable. Compensation is provided to enable the Ministry compulsorily to acquire the ownership of any animals which it considers should be slaughtered in the public interest. These animals become the property of the Ministry, which pays the owner compensation according to the prescribed scale.

Great Britain has been happily free from cattle-plague since 1877, from pleuro-pneumonia since 1898, from epizootic lymphangitis since 1906, from sheep-pox for many years, and from rabies since 1921. Foot-and-mouth disease is recorded as having first appeared in Great Britain in 1839, and has been intermittently present ever since that year. The country was subject to severe epidemics of this disease from 1869 to 1872, when the number of animals attacked was estimated at three millions. Another severe visitation commenced in 1880, and was not eradicated until 1886; in 1883, no fewer than 18,732 outbreaks were notified. It is estimated that 800,000 animals were attacked during this series of outbreaks. The country enjoyed periods of freedom from foot-and-mouth disease from 1886 to 1892, from 1895 to 1899, and from 1903 to 1907, but from 1892 to the present the number of infected premises has

never exceeded 100 in any year except in 1922, when 1140 outbreaks occurred, in 1923, when the number of outbreaks reached 1894, and in 1924, when the number of outbreaks had reached 1260 up to the 30th June. It would appear that since the War some fresh factors have come into operation tending to increase the susceptibility of this country to the invasion of foot-and-mouth disease from outside sources. The policy hitherto adopted, known as the "slaughter" policy, entails considerable expenditure when the outbreaks become numerous, and the discovery of some preventive agent would reduce the necessity for slaughter by a large percentage, and consequently the expenditure involved in effecting eradication. Departmental committees are investigating this subject.

As regards glanders, the adoption of the Mallein test in 1907 as a diagnostic agent has effected a reduction in the number of outbreaks from 1066 in 1906 to only 9 in 1923. Entire eradication of this disease from Great Britain is anticipated, the problem thereafter being one of the prevention of its reintroduction by horses imported from abroad. At present these are required to be accompanied by satisfactory veterinary certificates.

Swine-fever is a serious infectious disease which, if not kept under control, would have grave effects upon the pig-keeping industry generally. The average number of outbreaks per annum during the last five years has been 1753.

Sheep-scab can be eradicated by efficient double-dipping; that is, dipping twice with a maximum interval of 14 days between the two dippings in a dip approved by the Ministry for this purpose. The enforcement of compulsory dipping has had a salutary effect in reducing the prevalence of the disease from 1792 outbreaks in 1903 to 689 in 1923. The problem of eradication is one for sheepowners themselves to solve, and the Sheep-Scab Order of 1923 renders an owner liable to heavy penalties if disease appears amongst his sheep, unless he can prove that he took adequate measures to keep his sheep clean.

Parasitic mange in equines can also be eradicated by proper treatment. The number of cases has been reduced since the Ministry in 1911 first applied general measures for its suppression, from 2873, involving 6068 affected horses, to 796 outbreaks in 1923 with only 1126 horses attacked.

The Act of 1894 empowers the Ministry by Order to add other diseases to the list of those to be dealt with by state action. Some of the more serious diseases in animals, such as contagious abortion in cattle, Johne's disease, etc., do not lend themselves to action by administrative order, either because the nature of the disease renders this impracticable or because the imposition of such measures of control as would be necessary would interfere unduly with the industry and thus make the remedy applied worse than the disease itself. In recent years facilities have grown up enabling livestock owners to an increasing extent to indemnify themselves by insurance against losses due to disease amongst their stock. W. P. S.

DOCKS.* The article Dock in the body of this Volume, revised in 1911 and 1924, describes the recent progress in the dock system of this country. Considerable progress has been made in the docks at Bristol, which at the present time cover 144 acres. The Royal Edward Dock will accommodate vessels much larger than any now (1912) afloat. The railway connections of the dock are very complete, and quick-working cranes and elevators afford facilities for the loading and quick despatch of cargoes of all descriptions—grain, ore, green fruit, etc. At Southampton great improvements have been made, the depth of water available and the quay accommodation increased, with two very fine graving-docks. The arrangements for dealing with cargoes, both for import and export, have been greatly improved.

One of the most important questions for the prosperity of the trade of England, namely, the development of the Port of London, after remaining for several years in abeyance, was cleared up by the Port of London Act 1908. The Annual Report of the Port of London Authority (March 1912) states what has occurred since. The trade of the Port was greatly hindered by the strikes in 1911. With these troubles it is not wonderful that while the shipping which paid Dock dues showed an increase of 208,690 tons during the year ended March 1912, the shipping entering the dry docks during the same time was 77,222 tons less than in the previous year, and the value of the total trade showed a decrease of nearly £8,000,000. The improvements of the Dock accommodation which had been agreed on were commenced during the year at a cost of £3,896,700, as well as the deepening of the navigable channel of the river. The most recent surveys show that there is improvement along the whole line of the channel of the Nore which the authority decided to dredge. Much, however, remains to be done, and the intricacy of the questions affecting the flow of the water in the river Thames, and hence the position of London as a port, require the most careful attention of the Legislature. The superiority of the trade of London still continues. The total foreign trade for the six leading ports of the United Kingdom for 1911 was as follows:—

United Kingdom	£1,237,035,959
London	368,202,536
Liverpool	336,489,017
Hull	71,453,077
Manchester (including Runcorn)	54,143,473
Southampton	47,216,924
Glasgow	47,135,993

Meanwhile the tonnage at the ports of Rotterdam, Hamburg, and Antwerp, three of the principal competitors of London, has increased in a far greater proportion, with greatly improved methods of dealing safely and rapidly with the goods consigned. In England closer communication with the entire railway system of the country is essential.

Since the opening of the new dock at Immingham by the King in July 1912 the progress up to April 1913 has been rapid. The chief feature is the shipment of coal, some three-quarters of a million tons having been shipped during the six months. Large quantities of iron ore from Sweden and log timber from the Baltic have been imported. Regular sailings by the Peninsular and Oriental Steam Navigation Company, the Wilson, Glen, and Hamburg-American Lines to India, the Far East, Australia, the West Indies, and South America have been inaugurated, the cargoes consisting principally of cased goods from the West Riding and Lancashire. A huge granary is provided with all the latest improvements for handling every class of grain. The timber trade will develop rapidly, as there is a large timber-pond with deep water berths, and also enormous timber yards with specially laid-out sidings and machinery of the very latest type. The ships taking coal are rapidly handled. The eight hydraulic hoists can each load 700 tons per hour. The hydraulic cranes vary from 30 cwts. to 50 tons, being principally 2 ton and 10 ton double-power luffing cranes; while on the mineral quay a 50-ton crane with luffing jib is being erected, also a large number of 3 ton and 5 ton double-power gantry type cranes. In the transit sheds are a number of 30 cwt. electric cranes. For the purpose of carrying timber in the yards there are several fast-travelling steam cranes. The area of the dock property is 1000 acres, the area of the dock 45 acres, the depth of water on sill at lowest and highest state of the tide is 27½ feet and 47 feet respectively. There is a magnificent graving dock 740 feet long, with 22 feet of water on blocks, which can accommodate vessels of 5000 tons gross. At this dock there is a travelling crane the full length of one side of the dock capable of lifting 15 tons at the centre with an auxiliary lift of 3 tons at 75 feet radius. Workshops are being erected and up-to-date machinery installed for the rapid and economical repair of all sorts of damage and overhaul work.

British Harbours.—In 1922 the arrivals and (*in italics*) departures in millions of tons at the various ports were as follows:

London, 14·4, *11·4*; Liverpool, 11·2, *10·5*; Cardiff, 6·9, *8·9*; Newcastle, 7·2, *8·1*; Southampton, 6·7, *6·6*; Hull, 4·9, *4·5*; Glasgow, 3·3, *4·2*; Plymouth, 4·3, *4·1*; Newport, 2·1, *2·8*; Middlesborough, 2·0, *2·0*; Swansea, 2·2, *2·7*; Manchester, 2·4, *2·0*; Bristol, 1·9, *1·7*.

The Ownership of Docks by the various Railway Companies is as follows:

London, Midland and Scottish Railway Co.—Barrow-in-Furness, Ellesmere, Fleetwood, Garston, Runcorn, Widnes.

Great Western Railway Co.—Cardiff, Barry Docks, Barry Port Dock, Newport, Penarth.

London North-Eastern Railway Co.—Great Grimsby, Hartlepool, Harwich, Hull (all docks), Immingham, King's Lynn, Lowestoft, Middlesborough, Silloth, South Shields, Sunderland (Wearmouth Dock), Alloa, Bo'ness, Grangemouth, Methil.

Southern Railway Co.—Southampton.

E. L. H.

DOWELL, Stephen (1833-1898), for many years Assistant Solicitor to the Board of Inland Revenue, wrote a useful work on the *History of Taxation and Taxes in England*, a subject with which, through his official duties, he was thoroughly familiar. Of the four volumes into which the work is divided, the first two are devoted to the history of taxation as connected with the general current of English political events, arranged in periods, extending from the days of the Romans in Britain to the year 1885, while in volumes iii. and iv. the different taxes taken separately are discussed and grouped under their several headings, as Direct Taxes, Taxes on Persons, on Property, etc. A second edition of the *History* appeared in 1888.

Dowell also published: *History and Explanation of the Stamp Duties*, 1873.—*The Income-Tax Laws in force in the United Kingdom*, 1885.—*The Acts relating to the Tax on Inhabited Dwelling-Houses*, 1893.

DRAGO DOCTRINE. In 1848 Lord Palmerston declared that it was not the policy of the British Government to assist its subjects in enforcing their claims against a foreign state, although it was undoubtedly the international right of every state to do so. Nevertheless, the loss to British subjects might be so great that it would become the duty of the British Government to intervene, even to the length of using armed force. These principles were re-affirmed by Lord Salisbury in 1880. In December 1902, Great Britain, Germany, and Italy instituted a blockade of certain ports of Venezuela in order to enforce certain claims, contractual as well as tortious, presented to the Venezuelan Government by their respective subjects. Dr. Louis Drago, the eminent jurist and Minister of Foreign Affairs of the Argentine Republic, in a Note to the American Government laid down the principle "that the public debt cannot occasion armed intervention nor even the actual occupation of the territory of American nations by a European power." Later, he drew a distinction between the public loans of a state and other forms of contractual obligations. He contended

that bonds constitute an exceptional class of obligations; because (1) they are issued by the sovereign power of the state pursuant to legislation; (2) they are made payable to bearer; (3) the purchaser buying the bonds in the open market acquires his rights as obligee without other formality or relation with the debtor government; and (4) when payment is for any reason suspended, there is no means of appeal by judicial action or otherwise to the debtor state, inasmuch as the suspension of payment occurs by virtue of the sovereign authority of the state.

That is to say the repudiation of the contract by the obligor state by the exercise of sovereign power removes from the state of the obligee the right to take steps, which it might have taken, if the obligor had not made use of its sovereign power. But obviously such exercise of sovereign power, by reason of the consequences which it entails, necessarily produces an international issue, the solution of which the state of the obligee is entitled to demand.

This doctrine failed to obtain general recognition. By Convention II., however, of the Hague Conference, 1907, entitled the "Limitation of the Employment of Force for the Recovery of Contract Debts," the Contracting Powers agreed not to have recourse to armed force for the recovery of contract debts claimed from the Government of one country by the Government of another as being due to its nationals. But if the debtor state refuses or neglects to reply to an offer of arbitration, or, after accepting such offer, prevents any "Compromis" from being agreed on, or after arbitration fails to submit to the award, the creditor state may resort to armed force. This provision recognises that an international judicial remedy, such as arbitration by the Permanent Court of Arbitration at The Hague, must be exhausted before an appeal to armed force becomes justifiable. Thus "a debtor state is protected by the law until it puts itself outside the law" by rejecting one or other of the reasonable conditions contained in the Convention. This scheme was due to General Horace Porter, a delegate of the United States, and it received the support of Dr. Drago, although it did not go to the length proposed by his doctrine. It is believed that the Convention covers all forms of indebtedness of a state to an alien, embracing without distinction public loans evidenced by bonds, and that the adjustment of any issue arising from non-payment is contemplated, whether or not resulting from a repudiation of its contract by the debtor state through the exercise of its sovereign power.

[Hall, *International Law*, 7th ed. by Pearce Higgins, p. 290 (1917); Hyde, *International Law*, i. §§ 306-309; Drago, *State Loans in their Relation to International Policy*, Am. Jour. I.L., i. 692. Pitt-Cobbett's *Leading Cases on International Law*, 4th ed. by Bellot, i. 181-2 (1922).]

H. H. L. B.

DRAIN OF BULLION.* For a number of years before the outbreak of war in 1914 the adequacy of our gold reserves had been a subject of widespread interest and earnest discussion, and there were not wanting those who predicted disaster if our financial system were, for any reason, faced with a sudden crisis. The test to which that system was subjected in the fateful days of July and August 1914 is, therefore, of extraordinary interest. The market in London was by 24th July already very much depressed owing to the political disturbance in Ulster. When to this was added a feeling of uncertainty as to the outcome of events on the Continent, dealings on the Stock Exchange became steadily more difficult. Quotations fell, and at the same time the English finance houses adopted an extremely cautious policy, refusing to renew expiring loans. The result was a strong demand abroad for sterling to meet overdue debts, and the value of sterling rose quite abnormally. There was a rush to sell securities in the Stock Exchanges all over the world, for everyone wanted ready money to meet possible emergencies. The London Stock Exchange was forced to close on 31st July, for to have kept open longer would have made England the dumping ground of the world, and gold would have poured out of the country in exchange for the securities realised. The most liquid resources of the banks, employed in the discount of bills, in advances at call and short notice, and to the Stock Exchange, were locked up and could not be called in. The Bank of England was the only resort for borrowers, and for its own protection it was forced to raise its discount rate from 4 per cent to 8 per cent on 31st July, and to 10 per cent on 1st August. A relief from the tension in the City was of the utmost importance, and accordingly the Bank Holiday was extended by Royal Proclamation from the 4th to the 6th of August. The Bank of England received from the Government the usual letter indemnifying it against issuing notes in excess of the limits fixed by the Bank Act of 1844, but only for a few days was it necessary for the bank to avail itself of this protection. In the meantime there was a general lack of change due to the banks being closed and, owing to the action of some of the banks in paying their customers in Bank of England notes instead of gold during the previous week-end, there was a queue at the bank waiting to secure gold in exchange for these notes. To protect the gold reserve of the Bank of England and to provide additional cash resources for the banks, the Government decided to issue emergency currency in the form of notes for £1 and

10s. To this end an Act, known as the Currency and Bank Notes Act, was passed on 6th August, and currency notes were in the hands of the public on the following day. The holder of a currency note was, and still is, entitled to obtain on demand at the Bank of England, London, payment for the note at its face value in legal tender gold coin. Postal Orders and Scotch and Irish Bank Notes were also temporarily made legal tender for the payment of any amount. Provision was made for currency notes to be issued to bankers through the Bank of England up to 20 per cent of their liabilities on deposit and current accounts. Such advances were made use of only for a short period, and the provision has since been withdrawn.

The effectiveness of these measures in protecting the gold reserve of the country may be judged from the following figures, given in the *Journal of the Institute of Bankers*, December, 1914. On 23rd July the gold held by the Bank of England was £40,164,000. Between that date and 30th July the bank lost, on balance, £2,032,000. Of this, £1,212,000 was withdrawn for home circulation and £1,218,000 was exported. The greater part of the amount exported was taken by France and Belgium, and only £275,000 went to the rest of the Continent, which we may assume to be Germany. The following week, the week of the outbreak of war, the Bank's stock of gold was reduced by £10,510,000 and the stock fell to £27,622,000. The total amount exported in that week was £2,740,000, of which France and Belgium took £1,678,000. Of the remainder, Switzerland, Egypt, Gibraltar, and Malta took between them £490,000, and the rest of the Continent the balance exported of £572,000. In the course of five weeks "the Continent," which we may assume to be Germany, took altogether £862,000. During these same weeks, the arrivals of gold from South Africa and other sources were between 3½ and 4 millions. This amount, after satisfying the requirements of India and the trade, was either taken by Paris or went into the Bank of England. There is no evidence, therefore, that Germany raided our gold at all at that critical time, either by withdrawing gold from the Bank of England or by purchasing part of the gold which arrived here from outside sources. Moreover, the degree of hoarding of gold during the early stages of the crisis did not reflect itself in large demands for withdrawal of gold from the banks. The public retained in their own hands for some time a large part of the gold already in circulation at the outbreak of war, but with a restoration of confidence this gold gradually found its way into the banks, and thence in due course into the central reserve at the Bank of England. There it has remained ever since, with the exception of the amounts transferred to the United States during the War and since in payment for munitions and of part of our debt to that country.

[See Kirkaldy, *British Finance, 1914-1921* (London, 1921), Sonne, *The City, July 1914-1915* (London, 1915), Sykes, *Banking and Currency*, chap. xxv. (5th edition, London, 1923), and Withers, *War and Lombard Street*, (London, 1915).] F. W. G.

DROZ, NUMA (1844-1899), was born at Chaux-de-Fonds, Switzerland. He was at first apprenticed as an engraver, but he deserted this profession for the career of a teacher. He was for a time professor in the gymnasium at Neuchâtel. In 1864 he founded *Le National Suisse*, a radical newspaper. In 1869 he was elected to the legislature, and two years later became Director of the Department of Public Instruction. He subsequently took charge of the Departments of the Interior (1875), Agriculture and Commerce (1879), and Foreign Affairs (1880). He was several times President of the Federal Council. In 1882 he was one of the negotiators of the Franco-Swiss commercial treaty. He published *Manuel d'instruction civique* (1884); *Cours élémentaire d'instruction civique* (1885). E. L. H.

DUNBAR, CHARLES FRANKLIN (1830-1900). Born at Abingdon, Pennsylvania. Died at Cambridge, Massachusetts. Graduated from Harvard College in 1851. Engaged for short time in business, then, because of failing health, spent a year in farming. He then studied law and was admitted to the bar in 1858. From 1859 to 1869 he was associate editor of the *Boston Daily Advertiser*, making it one of the leading papers in New England. In 1871 he was made Professor of Political Economy in Harvard University, but spent two years in study and travel in Europe before entering upon the professorship. From 1876 to 1882 he was Dean of Harvard College, and in 1890 became the first Dean of the Faculty of Arts and Sciences, serving in that capacity until 1895. In 1886 he became the first editor of the *Quarterly Journal of Economics*. Professor Dunbar was the second president of the American Economic Association, but never made any presidential address. He wrote comparatively little, the only book from his pen published during his life being *Chapters on the Theory and History of Banking*, 1891, which had been privately printed in 1885. This was an eminently clear and sensible text-book on the subject, which has been so widely used in the American colleges as almost to become a classic. A second edition was published after his death in 1901. A number of miscellaneous articles on banking and public finance were collected into a volume

entitled *Economic Essays*, and edited by O. M. W. Sprague in 1904. Professor Dunbar also published in 1891 a volume entitled *Laws of the United States on Currency, Finance, and Banking*, which was a reprint of the statutes on the subjects, condensing, however, the less important sections. Until the publication by the Government in 1895 and subsequently of all of the laws of the United States relating to loans, paper money, banking, and coinage, this compilation of Professor Dunbar's was much used. E. R. A. S.

ECONOMIC LIBRARIES.

The Goldsmiths' Company's Library, p. 870, Manchester Libraries, p. 872; Foreign Office and other Libraries, p. 873; United States Libraries, p. 873; John Crerar Library, Chicago, p. 874.

The Goldsmiths' Company's Library of Economic Literature. This is a collection of books and tracts intended to serve as a basis for the study of the industrial, commercial, monetary, and financial history of the United Kingdom, as well as of the gradual development of economic science generally. The first impulse to the making of the collection, which was formed by Professor H. S. Foxwell, came from his predecessor at University College, the late Professor Stanley Jevons, about 1875, and the first book purchased for it was a copy of Lardner's *Railway Economy*, bought at Mr. Jevons's suggestion from a bookstall—Mr. Jevons observing that this book had led him to begin his famous researches into the mathematical theory of economics.

The collection thus commenced at first aimed at the provision of material for a thoroughly historical edition of the *Wealth of Nations*. Afterwards Arnold Toynbee's special interest in the Industrial Revolution (*q.v.*) led to the collection of material for his use covering the period 1760-1860. Later, again, the evils resulting from the demonetisation of silver became marked, and called attention to currency and banking history. The library having thus assumed a general character, efforts were made to make it fairly complete so far as English history was concerned, and in some aspects at least fairly representative of foreign movements. After thirty years of labour the catalogue contains over 30,000 distinct entries, without taking account of a mass of political literature acquired incidentally, and a large collection of original Acts of Parliament of special economic interest. Very much, of course, remains to be done; thirty years more might well be spent on the work. From this account of its origin the stronger points of the collection will be inferred. The history of economic thought is practically complete so far as England is concerned, and very full so far as concerns the French economists before and during the Revolutionary period. No attempt has been made to deal in the same thorough way with the literature of other European countries; but there is a fair collection of works in Italian, Spanish, German, Dutch, etc.; and American economics is well represented.

To come more to detail, the following subjects, among others, will be found fully illustrated: the early history of English Trade, Companies, and Colonies; Mercantilism and Colonial Policy; the Navigation Laws; Guilds and the Towns; Fairs and Markets; Interest and Usury; Early Banking; the history of Agriculture, Enclosures, Commons, Allotments; the rise of foreign trade, especially of the East Indian, and the French and American trades; the Agrarian Revolution of the 18th century; growth of English industries; Machine Industry, the Industrial Revolution, the large towns and their problems; Municipal and Political Reform; Factory Legislation; Trade Unionism; Friendly Societies and Savings Banks; the Co-operative Movement; Education; the condition of the people generally; Socialism in all its forms—Owenism, Chartism, the English socialistic movements generally, indigenous or imported; French, German, and American Socialism; Emigration and Population movements; the history of the Poor Law, and especially of the New Poor Law of 1834; the question of Land Tenure in England, Scotland, and Ireland; Tariff policy in various countries, especially the Anti-Corn Law agitation, the German Zollverein, the protectionist reaction in Europe and America after the Peace of 1815; Financial policy and tax systems: the development of communication, roads, posts, canals, railways, and telegraphs; the growth and changes of Foreign Trade; Competition, its modern developments, abuses, and regulation; the rise of great industrial and commercial combinations; the modern developments of Banking; the history of currency and various currency systems; the history of prices and wages; index numbers; international monetary policy; the great markets for securities and for produce; the history and theory of statistics; the mathematical theory of economics; public control and the economic functions of the State generally; economic criticism and social philosophy. It may be added that those interested in local history will find in the library books or tracts printed in almost every part of the British dominions at home or abroad.

In the selection of literature for the library

the main purpose kept in view has been to make it historical and catholic. No pains or expense have been spared to ensure that, as far as possible, all sides in a controversy should be represented. It therefore differs widely from such a collection as that of M'Culloch, who excluded, with rare exceptions, all books which did not come up to his standard of orthodoxy. The object has been to mirror opinions, not to judge them. If, for instance, the mercantilist view was predominant in the early 18th century, it will be found predominant in the library over that period, and so on. But the dissentient opinions are as faithfully represented as the fashionable ones; no standards have been imposed. If any partiality has been shown, it has been in the desire to put in evidence the scanty and obscure literature which gives a clue to the opinions of the almost inarticulate masses of the people, literature which will probably have for future ages a very special and pathetic interest. Whatever the subject in question, a collection made on these lines would necessarily include a large quantity of tracts and fugitive publications. But in economics, more perhaps than in any other subject, its historical sources are largely of an occasional, non-formal character; and the brief contributions of practical men are often of much greater value than the more systematic disquisitions of professed writers. Hence there is an exceptionally large proportion of pamphlets and tracts in the library, not much less in number than 20,000; among which may be included a large collection of extracts from reviews. The opinions of Dr. Johnson and Macaulay as to the value of such literature are well known. It is to no one of more value than to the historian of economics.

The library also contains a large number of broadsides, many of them from the fine collection of Lord Lauderdale. There are also hundreds of MSS., many of them of great interest, and a large number of autograph letters of economists and statesmen. Among other collections mention may be made of the biographies, the portraits, the prints, some examples of paper moneys, etc.; and the bibliographical collection, which includes a copy of the Catalogue of the Massie Library, the most remarkable collection of English economic literature previously formed.

The main purpose of the library being to facilitate historical research, the contents have in general been arranged chronologically, with subject classification under each year where indicated. But the ordinary forms of catalogue are also in process of preparation. The same arrangement, so far as may be, is observed in the shelving and disposition of the books, but many departures from it have been found necessary. Before 1800 only one general chronological arrangement is adopted for each size—folio, quarto, octavo, and duodecimo; after 1800 special subjects have separate chronological arrangements in special cases. Very long series, and certain classes of books not likely to be so often consulted, will generally be found in the galleries.

Taken as a whole the Goldsmiths' Library is specially remarkable for the condition of its books. Books on Trade, Finance, and Social History, which were not considered to be "literature" by any one before the appearance of the *Wealth of Nations*, nor by most people till a century later, are usually found in bad condition both internally and externally, not having been preserved in good libraries. Those in this collection are for the most part picked copies. Many are presentation copies to the statesmen and magnates whose libraries are referred to below. Many are in sumptuous English and French morocco bindings of the 18th, and in less number of the 17th centuries. The condition of the French 18th century books is particularly fine, most of them being in original extra bindings. Where rebinding was required, the sound general rule has been observed of never binding together what were published separately; and generally everything has been done to facilitate historical and comparative research, which seems the main *raison d'être* of special collections.

The exceptional condition of the books is largely explained, as hinted above, by their *provenance*. Owing to agricultural depression and other well-known causes, the period subsequent to 1875, over which their collection has extended, has been specially remarkable for the number of old and famous libraries brought to the hammer. The following list contains the names of some of those libraries which deserve mention here for the importance of their contributions to this collection:—

The Sunderland, Clandon, Osterley Park, Hamilton Palace, Duke of Sussex, Duke of Cambridge, Duke of Buccleuch, Duke of Portland, Earl of Lauderdale, Stanesby Alchorne, George Chalmers, Gunning, Sir Robert Peel, Lord Monteagle, Agar-Ellis, Lord Prestongrange, Visct. Bruce of Ampthill, Gibson Craig, James Crossley, Frere of Roydon, General Wilson, Gardyne, Lord Ripon, Speaker Onslow, Lord Ashburton, Pleydell Bouverie, Sir John Fenn, Lord St. Leonards, Sir R. C. Hoare, Cornelius Walford, Capelle, Pole-Carew, Trentham; and amongst economists and reformers, Arthur Young, Dean Tucker, Adam Smith, Ricardo, Colquhoun, Cobbett, Francis Place, Quetelet, Joplin, Baring, Senior, William Allen, Oastler, Sadler, Kydd, Lovett, Truelove, Considérant, Paul Janet, Sabatier, Roscher, Col. Hyde, Ruding, Cliffe Leslie, Bonamy Price, Smiles, Hyde Clarke, Gerritsen, etc., not to mention the names of many living donors. Indications of *provenance* have been as far as possible preserved in the books themselves,

and in the shape of book-plates, where it has been necessary to break up the original volumes.

It will be obvious that a library of this kind could not be formed except at a very heavy expense. This expense, always a strain on the modest income of an English professor, became insupportable in view of new demands on that income; and, accordingly, with much regret, arrangements were made to accept an offer of purchase on behalf of a great American library. But the completion of the sale was very generously allowed by the trustees to stand over for six months, ending June 30, 1901, to give opportunity to arrange an English purchase. After various abortive attempts to effect this, the Council of the Royal Economic Society made an appeal to the public in *The Times* of June 25, 1901, supported in a vigorous leader of the same date. Two days later an offer of purchase was received and accepted from the Worshipful Company of Goldsmiths; and the collection was thus retained for the country whose history it had been designed to illustrate.

The Goldsmiths' Company subsequently presented the library to the reconstituted University of London, to be deposited in its central building, now at the Imperial Institute, South Kensington. The existence of this fine library, due to the munificence of the Goldsmiths' Company, is a good example of the manner in which wealthy associations and individuals might promote the advancement of learning and science in this country as in others. The study of the economic progress of different countries under different forms of legislation can hardly be undertaken by individuals without similar assistance. Fresh accessions are continually being made by the generosity of the Goldsmiths' Company, who have also made large gifts for binding and library furniture.

In concluding this notice, it is only the barest justice to mention the very large share taken in the laborious work of compiling, cataloguing, and generally perfecting the collection, by the assistant-librarian of St. John's College, Cambridge, Mr. E. W. Lockhart. Without his very skilled, intelligent, and untiring help, the collection could never have attained its present extent or degree of excellence. His name should always be associated with the Goldsmiths' Economic Library.

All communications respecting the use of the Goldsmiths' Company's Library of Economic Literature must be addressed to the librarian at the University of London. H. S. F.

[Professor Foxwell's dissatisfaction with the arrangements for the maintenance and preservation of the Library led to his resignation from the Committee. He desires it to be made clear that he has no responsibility for, or knowledge of, anything done in connection with the Library since March 25, 1915.]

Economic Literature in the Manchester Libraries. Manchester is unusually well provided with important libraries. Humphrey Chetham, who died 1653, left the bulk of his estate for the foundation of a blue-coat school and public library which now contains 60,000 volumes. Although no special feature has been made of political economy, it contains some of the earlier books, especially of the 18th century, and has a remarkable collection of broadsides presented by J. O. Halliwell-Phillipps, who printed a catalogue of them in 1851. This is merely a numerical list devoid of either alphabetical order or classification. The collection contains much unused material for the history of commerce and industry. The Portico Library and Newsroom, which contains 60,000 vols., is a proprietary institution owned in shares and dates from 1806, and includes some of the modern literature of political economy. A remarkable collection of pamphlets formed by Charles Leigh of Adlington contains many items of interest respecting the affairs of the 18th century. The Athenæum, founded in 1835, largely by Cobden's influence, is essentially modern, and contains 21,000 vols. The largest collection is that of the Free Library, which was the first founded under the Public Libraries Acts, and was opened in September 1852. It consists of a central library and nineteen branches and newsrooms. The Reference Library contains 155,000 vols., and from the beginning special attention has been paid to the collection of material relating to the literature of political economy in its widest sense. A complete set of the *London Gazette* may be named. The collection on trade formed by Nicholas Magens, the banker, at the end of the seventeenth and beginning of the eighteenth centuries was acquired in 1852, with the exception of some Americana, and forms the foundation of one of the largest economical collections in the country. To this have been added the tracts collected by Fullerton of Carstairs, by Sir Edwin Chadwick, and others. In recent years special attention has been given to the literature of municipal institutions, but the collection is also rich in material for the history of trade, the organisation of labour, and the fiscal controversy. The librarians from the commencement have paid special attention to the collection of pamphlets, and this has been facilitated by the fact that Manchester has been a centre of the active discussion of economic problems. The library of the Manchester Statistical Society, the oldest in the kingdom, now forms part of the city library, which has also absorbed the foreign library. The collection of parliamentary papers and official publications is large, and foreign and colonial documents have been freely added. Another strong point is the extensive series of periodical publications in long sets, including, for instance, the *Journal des Économistes*. This feature is also seen in

the library of the Manchester Literary and Philosophical Society, which was founded in 1781, and, chiefly by exchange of publications, has formed a library which contains the issues of the most important academies and learned societies of the world. It contains 29,700 vols. in a house which dates from the early years of the 19th century, and has memories of Thomas Percival, John Dalton, and other famous men. The Law Library, whilst formed only for professional purposes, contains 12,000 vols., including some books which are of importance for the history of certain branches of economics. The University of Manchester has developed from the college founded under the will of John Owens, a wealthy merchant, who died in 1846. The library now contains 100,000 vols. and includes the important collection made by William Stanley Jevons, who held the chair of Political Economy in Owens College before his removal to London. His books extend to 2394 volumes, and form about one-half of the University's economic section. In connection with the Faculty of Medicine there is the library of the Medical Society (established 1834) extending to 32,000 vols., and containing many books, some of great rarity, dealing with topics common to medical and economic science. The latest addition to the literary institutions of Manchester is the John Rylands Library, founded in 1899 by Mrs. Enriqueta Rylands in memory of her husband, who was one of the merchant princes of the city. It contains 110,000 volumes, and by the purchase of the Althorp Library it has become one of the greatest storehouses of early printed books and of the Italian literature of the Renascence—departments in which the student of economics may find some fresh fields of research.

Although there is no organic connection between the various Manchester libraries, except that the Medical Library is housed in the University, there is much unofficial co-operation, so that any one engaged in serious research will easily be guided, when necessary, from any one institution to all the others. W.E.A.A.

The Foreign Office is in possession of a very interesting Library containing a considerable number of works of reference dealing to a large extent with the Colonies, and also with the condition of other countries of the world, as existing in the first half of the 19th century and down to a somewhat later date. A very complete index was added by Mr. W. M. Bucknall at the time he was the librarian.

This Library was formed by the Board of Trade before the year 1866. It would be a useful thing if it were returned to the office where it was originated and brought up to date, and we are glad to record that a suggestion to this effect has recently been made. Many of the works it contains are rather rare. The Royal Statistical Society and the London School of Economics and Political Science both possess valuable collections of economic works.

United States. The most important libraries bearing on economics in the United States besides the Crerar and Newberry Libraries in Chicago are as follows:—

1. The New York Public Library on the Astor, Tilden, and Lenox Foundation (librarian, Dr. John S. Billings) is believed to have the best collection of economics of any public library in the world outside the British Museum. This is certainly true of American economics.

2. The Congressional Library at Washington, which has added immense stores in recent years.

3. Of the university libraries; among these the most important in economics are, in order mentioned, Columbia, Harvard, and on a level Yale, Johns Hopkins, and Chicago.

4. The University of Pennsylvania has the old collection of Carey and Baird, which is strong in eighteenth-century English literature. (See H. C. Carey.)

5. The Boston Public Library is a very fine one.

6. The Wisconsin Historical Society Library is also very strong.

7. Of private libraries, that of Professor Seligman of Columbia University contains about thirty thousand volumes and many pamphlets on economics. The mediaeval literature is well represented, and there are a fairly large number of incunabula. The library is strong in the early English literature of the sixteenth, seventeenth, and eighteenth centuries, containing not a few items that are not represented either in the Goldsmiths' collection or in the British Museum. Special features are the broadsides relating to the chief economic topics of the early period as well as a rich collection of Irish items. The foreign literature, especially early Spanish and Italian, as well as the German Cameralists and the French Physiocrats, is very completely represented. Professor Seligman has devoted particular attention to the British literature of money, public finance, and labour. In the latter field the library includes half of the Francis Place collection, the other half being in the British Museum. It is also rich in the periodical literature of labour and Chartism, containing a number of titles not found in Foxwell's bibliography. Attention might also be called to the rich collection of early railway literature. French and German socialism is well represented with almost complete collections of the original editions of St. Simon, Fourier, Cabet, and the like.

This library is said to have a more complete collection of the German socialists, including Marx, Rodbertus, and Lassalle, than is to be found in any German library, with a great mass of pamphlets on the finances of the French

Revolution and on the socialistic movements in France, especially 1830 and 1848.

The most striking feature of the library, however, consists in the eighteenth-century Americana. It is especially strong in the early monetary literature and in the revolutionary and post-revolutionary writings. As regards the first half of the nineteenth century, especial attention might be called to the labour and socialist periodicals, as well as to the rarer pamphlets on American finance, protection, and transportation.

Attention might also be directed to the fact that with few exceptions all volumes of pamphlets have been broken up and separately bound. All publications before 1800 which are not found in the contemporary binding have been rebound, chiefly by Riviere, in full or half levant, so that the library is in exceptionally good condition.

As regards English literature, it has every work mentioned in M'Culloch's bibliography, and many items which he does not mention.

JOHN CRERAR LIBRARY, THE, CHICAGO. The John Crerar Library, the latest established of the free public libraries of Chicago, owes its existence to the bequest of the late John Crerar, for many years a prominent merchant of the city. The endowment realised from this bequest is conservatively estimated at $3,400,000 (say £680,000), producing an annual income of over $160,000 (say £32,000).

The library was incorporated 12th October 1894, organised 12th January 1895, and opened to the public 1st April 1897. Its character and scope as a free public reference library of scientific literature were determined by the directors from their personal knowledge of the views and wishes of the founder, and after consultation with the governing boards of the other public libraries of the city.

Its field may be defined as that of the natural, physical, and social sciences, and their applications. In view of Mr. Crerar's desire that the books and periodicals might be "selected with a view to create and sustain a healthy moral and Christian sentiment in the community," the directors have always regarded the social sciences as one of the most important portions of this field. For convenience in dealing with appropriations, statistics, etc., the books are divided into six departments: general works, social sciences, physical sciences, natural sciences, medical sciences, and applied sciences.

On 1st January 1907 the department of social sciences had the largest number of volumes, in round numbers, 55,000 out of a total of 200,000; the second largest number of pamphlets, 20,000 out of 65,000; and received currently the second largest number of periodicals, 500 out of 2500.

The department of social sciences has eleven divisions: general works (including sociology), ethics, religion, statistics, political science, political economy, law, administration (including public documents), charities and correction, education, commerce and communication, manners and customs (including folk-lore and the woman question). Of these the most important is political economy, with about 16,000 volumes and 12,000 pamphlets. Then follow administration and documents, 14,000 volumes and 1000 pamphlets; general works, 6500 volumes; education, 5000 volumes; and manners and customs, 3500 volumes and 3000 pamphlets. While commerce and communication as a division of the social sciences is credited with only 2500 volumes, it might be said that if the works dealing with the technical and administrative sides of the subject were included, the number would be more than doubled.

It has been the purpose of the directors to develop the Library symmetrically, and by the addition of the latest works and the completion of the files of periodicals, rather than by purchases *en bloc*. Nevertheless they have not hesitated to take advantage of exceptional opportunities. Thus they were ready to purchase the collection of Prof. H. S. Foxwell on economic history (see p. 870), had it not been kept in England. Of these special acquisitions the largest and most important, except the transfer of the medical department of the Newberry Library, is that of the private library of the late Mr. C. V. Gerritsen, of Amsterdam. It consisted of some 18,000 volumes and 15,000 pamphlets on social and economic subjects, being especially full on finance, banking, labour, and socialism. It included a collection, formed by Mrs. Gerritsen (Dr. Aletta H. Jacobs), of nearly 6000 volumes and pamphlets on the social, political, and legal status of woman. A printed catalogue of this part of the library, complete to 1900, was exhibited at the Paris Exposition of that year, under the title of *La femme et le féminisme*, and received a diploma of honour.

The private library of Professor R. T. Ely, of the University of Wisconsin, was acquired in 1902. It covered the whole of political economy, but was especially strong in works dealing with American labour and social movements. It consisted of some 6000 volumes (600 of which were bound volumes of labour periodicals) and 4000 pamphlets.

The income of a bequest from its second president, the late Huntington Wolcott Jackson, is applied to the formation of a collection on constitutional law. The total number of volumes in this collection is now about 350.

In public documents the Library is rather stronger than might be expected, considering the short time it has been established. It is a "designated depository" of the Congressional documents, a special depository of the Congressional documents, a special depository of the publications of the U.S. Geological Survey,

and one of three depositories of all bills, resolves, and acts of Congress since 1901. Many state and some city documents have been acquired. Of foreign documents it has all the parliamentary papers of Great Britain since 1896, and most of the earlier ones on economic subjects; a nearly complete set of the parliamentary papers of Canada; a very full set of those of the Netherlands; a good set of those of Sweden; an unusual collection of French documents of the 15th to the 18th centuries on economic subjects; many serial official publications of Austria, France, and Germany; and a noteworthy collection of Australian documents dealing with the labour question, presented by the late Henry D. Lloyd.

In periodical literature also the Library is stronger than might be expected. Many of the 500 periodicals on the Social Sciences which are currently received are represented by complete sets, and in addition the 8000 volumes of periodicals and society transactions classed as general works offer much to the student of the social sciences. The publications of over one hundred such societies are currently received, and complete or nearly complete sets are available of about half of them.

As the public libraries of the city have adopted the policy of avoiding unnecessary duplication, a union list of the serials in them was thought to be desirable. In 1901 the Chicago Library Club issued such a list, and the John Crerar Library has issued a supplement, the second edition of which appeared in 1906. The original list and the supplement give the location of 12,000 serials in nineteen libraries.

One other of the publications of the Library is of some general interest. The list of Bibliographies of Special Subjects gives not only the distinctly bibliographical works on each subject, but also the works which contain bibliographical material thought to be of value. The arrangement is systematic, and there are about 400 entries on the social sciences. C. W. A.

ECONOMICS, TEACHING OF.

General, p. 875; Cambridge (Economics Tripos), p. 877; Oxford, p. 879; United States, p. 881.

GENERAL. It is the main purpose of this article to describe the position of economics in the various universities other than Oxford and Cambridge, university colleges, and similar institutions in the United Kingdom. In the University of London Political Economy may be taken for the B.A., and there is an economic group for the M.A. There is also in the university a Faculty of Economics and Political Science (including Commerce and Industry), in which the degrees of B.Sc. and D.Sc. are granted. For the former candidates may present themselves for a pass or for honours. A more definitely commercial variant of the B.Sc. is at present under discussion by the university. Teaching in economics for the degrees of the University of London is provided in several institutions, of which special mention may be made of the London School of Economics (Clare Market), University College, King's College, and the Birkbeck Institute. The School of Economics was founded in 1895. In economic subjects its "appointed teachers in the University of London" number five, who deal respectively with Economic Theory, Statistics, Banking and Currency, Economic History, and Foreign Trade. There are other "appointed teachers" on such allied subjects as Economic Geography, and many lecturers in addition on general and special subjects. Instruction is given both in the day and in the evening. University College includes a professor (the chair was established in 1828, M'CULLOCH being the first occupant), an assistant professor, a lecturer on Statistics, and a lecturer on Commercial Methods. In addition the professor of Mathematics holds a statistical honours class. King's College has also a professor whose chair was not established until 1859, though lectures had been given for some time previously. At the Birkbeck Institute the present principal has taught economics for a quarter of a century. He is now assisted by a lecturer.

Closely related in design to the Faculty of Economics in the University of London (the first degree of which is B.Sc.) are the Faculties of Commerce of the University of Birmingham, of Manchester, and of Leeds (the first degrees of which are B.Com.). The first was founded in 1901, and the second and third at intervals of two years. At Birmingham the economic teaching is in the hands of a professor of Commerce (chair established 1901), and another of Finance, whose lectureship, created in 1902, was transformed into a chair in 1906. The course extends over three years, and can be taken only by day students. The same holds at Leeds, where the economic instruction is imparted entirely by one professor whose office was created in 1903. At Manchester, where attendances for three years are required in ordinary circumstances, and for four years when attendances cover less than seven hours a week, lectures held in the evening as well as those held in the day are recognised for the degree in Commerce. As in London, full courses of lectures are provided both in the day and evening. A professor of Political Economy and a lecturer on Economic History (first appointed in 1903), who assists also in other economic teaching, are responsible for the bulk of the instruction in Economics provided at Manchester, apart from Economic Geography, which is the subject of a distinct lectureship. The teaching of Economics at Manchester extends backwards for nearly half a century. Usually it was united with other subjects, but some years ago a distinct lectureship was instituted,

and in 1901 the lectureship was transformed into a chair. In this university and at Birmingham and Leeds economic subjects figure in another faculty or other faculties than that of Commerce. At Manchester honours may be taken in the Faculty of Arts in Economic and Political Science, as they may also at Liverpool. At Liverpool a professorship, created out of an earlier lectureship in 1891, and a lectureship, added in 1907, exist in Political Economy, in addition to a lectureship on Geography. A School of Commerce, the course in which does not lead to a degree, is slightly connected with the Liverpool university, and in this school lectures are given on commercial methods as well as upon other subjects. A proposal to institute a degree in Commerce is now under consideration. At the University of Sheffield Economics and Mental and Moral Science constitute the domain of a lectureship created in 1897. The subject has a place in the curriculum for graduation. In the University of Durham Political Economy is a voluntary subject for the B.A. and B.Litt. Two persons are engaged in the teaching, but only two courses are offered.

In addition to the universities some mention should be made of the university colleges and institutions of similar standing in England. Of University College, Bristol, Professor Marshall (professor of Political Economy at Cambridge) was the first principal, but after his retirement economics did not occupy a large place in the teaching of the college, until in 1901 a chair of Economics and Public Administration was created. There is, in addition, a lecturer in Economics, who has been holding small classes for some years, and doing the limited amount of work required until lately. In connection with the scheme for a University at Bristol, it is proposed to establish a degree in Public Administration and Economics or in "Commerce." At University College, Reading, the Professor of Mathematics and Economics (whose chair was created in 1907 out of a lectureship) devotes a limited amount of time to imparting economics for the commercial diploma granted by the college and for the London B.A. Courses in Economics are offered by the professors of History at the Royal Albert Memorial College, Exeter, and Hartley University College, Southampton, but practically no advantage is taken of them. At University College, Nottingham, an evening course is delivered by the professor of History. At Armstrong College, Newcastle-upon-Tyne, the lecturer on Philosophy used to be required to teach Economics also, but no lectures were given, and there is no provision of economic teaching to-day.

In all the universities of Scotland Political Economy may be taken as one of the subjects for the M.A. The group of honours known as Economic Science means Political Economy with either (*a*) Moral Philosophy, or (*b*) one of the history subjects of the honours standard, as supplementary subjects. At Aberdeen there is a lectureship in Economics established in 1905. At Edinburgh, where the staff is now one professor, whose chair dates back to 1871, and one assistant, made also lecturer on Economic History in 1904, the Court has decided to institute full courses in Economic History, qualifying for both the ordinary and honours degrees. When this is done, honours in Economic Science may be based entirely on a knowledge of economics. At Glasgow there is one professor (a lectureship founded in 1892 being replaced by a chair in 1896) who hitherto has engaged an assistant or assistants, and Economic History is taught, and work is done for both pass and honours. At St. Andrews one lecturer (the post was created in 1889) imparts all the instruction for pass and honours. University College, Dundee, now part of the University of St. Andrews, offers no economic teaching, though it did in the sessions 1885-87, when successful classes were held under the present professor at Glasgow. Usually in the Scottish universities, before the institution of separate posts, lectures on Political Economy were delivered by professors of allied subjects which sometimes were understood to include it.

The University of Wales comprises three constituent colleges, viz., Bangor, Aberystwyth, and Cardiff, and in the last two of these Economics is taught for graduation,—at Cardiff by an associate professor (work was begun by a lecturer in 1899), who devotes the whole of his time to Economic and Political Science, and at Aberystwyth by a lecturer who unites with this work some teaching in Philosophy. Political Economy may be taken as an intermediate subject and with Political Science for honours. At Bangor all that is attempted at present is an annual course of six lectures, on the George Rae foundation, on "Some aspects of Political Economy, with special reference to Banking."

As regards Ireland, Trinity College, Dublin, has enjoyed a professorship since 1832, in which year a chair was founded by Archbishop Whately, the occupant of which also teaches Commercial Law. Students are prepared in Political Economy for the examinations, pass and honours, of the Royal University of Ireland at the Queen's Colleges of Belfast and Cork. At the former there is one professor who also teaches Jurisprudence, and at the latter a professor of Mental and Social Science who delivers lectures on Political Economy.

From the above sketch it is evident that provision of instruction in Economics in the United Kingdom has received a distinct stimulus in the last dozen years, but the amount of work done, in respect both of the number of teachers of the subject and of the number of

students, is still far inferior to that done in Germany and the United States. In Germany Economics figures in all the universities, and plays a leading part in some, and there are, in addition, four higher commercial schools, the kernel of the courses in which is economic. In the United States (see ECONOMIC TEACHING IN THE UNITED STATES) there are some specialised higher commercial schools, and in the departments of Economics of some of the most prominent universities, large staffs of teachers and crowds of students are to be found. In France the teaching of Economics is in a peculiar position. As it has recently received a place in the curriculum of the Faculty of Law the amount of work done is considerable, but in the Faculty of Law it is practically confined to preparation for prescribed examinations of a somewhat limited scope, and inasmuch as all teachers in this Faculty must be doctors of law, it tends at present to border upon Jurisprudence. Outside the Faculty of Law there are in France few teachers and few students. S. J. C.

[Since the above was written, degrees in Commerce have been instituted in the University of London. The London School of Economics has developed into the most completely organised centre of economic teaching in the Empire. Mention should also be made of the Newmarch Lectures and the Jevons Memorial Lectures delivered annually at University College, London. The Professorship of Economics in the University of Liverpool, vacated by the death of Professor GONNER in 1922, has not been filled, and will, it is understood, be kept in abeyance for a few years.]

ECONOMICS TRIPOS, CAMBRIDGE. The Tripos in Economics and associated branches of Political Science was instituted by the University of Cambridge in 1903 in order to give encouragement to an important form of liberal education, and at the same time to make special provision for students who are proposing to devote their lives to the professional study of Economics, and for those who are looking forward to a career in the higher branches of business or in public life. And a curriculum of education, which is fairly complete so far as the main requirements go, was set up soon after. There are, however, several gaps which could be advantageously filled, if adequate funds were forthcoming.

No attempt is made to fill the mind of the student with a mass of technical information connected with the particular branch of business in which he is to be engaged. Such instruction may perhaps suitably be given in commercial schools to lads who are expecting to begin to earn their livelihood at an early age; and it may be given to even better purpose in the evening classes of universities and colleges in great industrial centres, for the benefit of those already engaged in business. Cambridge is not well placed for this work. But she has exceptional facilities for strengthening and developing the mental and social faculties of those who in after-life will bear the higher responsibilities of business, and who are prepared to work hard. The curriculum aims rather at giving an education which will enable men in the higher posts of business and of the public service to meet the ever-increasing demands on their intelligence and power of going to the root of difficult questions. For while there is in some directions a tendency towards increased specialisation in the work of subordinates; there is an even more marked tendency towards greater breadth and diminished specialisation in the work of those who are responsible for the main decisions in the conduct of large affairs.

So much is this the case that a man may be more fitly equipped to be a leader in business by an education which has braced his mind to hard work in subjects that have no connection with it, than if he had occupied himself with an enervating form of technical instruction, however directly that might bear on his after-work. But, provided the studies be themselves of a truly liberal character, the closer their bearing on his after-work, the more active is his interest in them likely to be during his stay at a university and in after-life. To a colliery manager who has made a thorough study of geology the shafts and galleries of a mine are a scientific museum and laboratory: his mind grows with his work, and he may increase the world's wealth of knowledge. But if the same man had neglected geology, and pursued other studies at a university, his B.A. degree would not improbably have been the end, instead of the starting-point, of the chief intellectual work and interests of his life. As geology is related to mining, so is economics to general business.

But in addition to a strong and alert mental faculty, the business man needs to have acquired a knowledge of human nature, together with the power of managing men, and to this end the social training afforded by life in a residentiary university of the Anglo-Saxon type is specially serviceable. For such a life draws out the faculties which are needed in the social relations of those who have to deal with large bodies of men and large public interests. On the river and in the football field the student learns to bear and forbear, to obey and to command. Constant discussion sharpens his wits; it makes him ready and resourceful; it helps him to enter into the points of view of others, and to explain his own; and it trains his sense of proportion as regards things and movements and persons, and especially as regards himself.

In short, the curriculum claims to give a liberal education; *i.e.* one which in the late Sir Richard Jebb's words "trains the intel-

ligence, gives elasticity to the faculties of the mind, humanises the character; and forms, not merely an expert, but an efficient man"; while none the less it is a practical education for large affairs.

With these aims in view, the study of economics is supplemented by a compulsory study of the recent economic and general history of the chief countries of the western world; by a study partly compulsory and partly optional of the elements of political science; and by an optional study of Civil Law as applied to economic questions, and of International Law.

The distinctive feature of this scheme is the prominence given to recent international history. If the study of history is to be international, time cannot be found during the short three years of undergraduate life for carrying it further back than the beginning of the 19th century; though some general knowledge of the antecedents of that century is included. Of course there are some students of economics for whom the earlier centuries of English history have a special attraction; and provision is made for this important class of students by their liberty to substitute one part of the Historical Tripos, in which prominence is given to this subject, for one of the parts of the Economics Tripos. For each of these Triposes is divided into two parts, the first of which is taken, under ordinary conditions, at the end of the second year.

The chief reason for giving this prominence to international studies is the belief that the exceptional insularity of the thought and studies of Englishmen is prejudicial to the best interests of the nation both intellectual and material. Especially is the notion that England may be contented to study economics simply from her own point of view passing away. It is admitted that some generations ago, when she was favoured by exceptional advantages, and was far in advance of other countries, she could afford almost to neglect their experience without much loss. But it is seen that the habit of depending solely on her own resources, which she thus acquired, continued after it had lost all justification; and, that as meanwhile all other progressive countries were giving much of their energies to learning from her and to learning from one another, she has been grievously handicapped in the race. Suddenly she has awakened to the fact that others, with certainly not greater natural vigour, have so profited by world experience as to advance faster than she has done in many directions, and to reach beyond her in a few. The studies encouraged by the Economics Tripos will help to free England from this great reproach.

The following is the schedule of the examination; the subjects marked with an asterisk are compulsory. In Part II. the student must take not less than two and not more than five papers besides those which are compulsory:—

Part I.

1. Subjects for an Essay. One paper.*
2. The existing British Constitution. One paper.*
3. Recent Economic and General History. Two papers.*
4. General Principles of Economics. Three papers.*

Part II.

1. Subjects for an Essay. One paper.*
2. General Economics. Three papers.*
3. Advanced Economics, mainly realistic. Two papers.
4. Advanced Economics, mainly analytic. Two papers.
5. Modern Political Theories. One paper.
6. International Law with reference to existing political conditions. One paper.
7. International Law with reference to existing economic conditions. One paper.
8. Principles of Law as applied to economic questions. Two papers.
9. Special subject or subjects. One paper each.

Some of the papers in each part include quotations from French and German writers. The Examiners have regard to the style and method of the answers.

The following are some details relating to Part I.:—

The paper on the existing British Constitution deals with the main outlines of the existing political and administrative organisation (central and local) of the United Kingdom, and with the government of colonies and dependencies, comparatively treated.

The questions on Recent Economic History deal chiefly with the United Kingdom and with the 19th century. They also take special account of other English-speaking peoples, and of France and Germany, during that period. Some knowledge of physical geography in relation to recent economic development is required.

The questions on Recent General History deal with the British Empire, Continental Europe, and the United States, and chiefly with the 19th century. They do not include military or literary history. Some knowledge of political geography is required.

The following are some details relating to Part II.:—

In Part II. an attempt is made to introduce into the Tripos system some of that elasticity and freedom of choice for each individual student which in some other Universities is obtained by a *viva voce* examination directed specially to branches of study which the candidate has selected for himself; his choice being, of course, subject to the condition that

they shall be sufficiently broad, and yet have a certain unity.

The main purpose of the three compulsory papers on General Economics is to secure that those who take Part II. of this Tripos after another Tripos (or a part of it), should have a sound knowledge of the main principles of Economics at large; and that those who have already taken Part I. of this Tripos should not specialise even their later studies too narrowly. In addition, these papers are to lay stress on Public Finance, the Economic Functions of Government, and the ethical aspects of Economics generally; some discussion of socialism being included under this head; since all these matters are more appropriate to the later than to the earlier years of a student's career. But that work in Economics which is most distinctive of Part II. must necessarily be directed into rather narrower channels; for no one can do really advanced work over the whole field. And here a double bifurcation is required.

The first bifurcation has reference to the divergent needs of active life and of professional study. Those who are preparing for public or private business must in their third year give their chief attention to realistic work, to the facts of business life, and to the direct application of economic principles to them. Accordingly two papers, arranged specially for this class of students, are mainly realistic. Two similar papers are of a more exclusively academic character, and make provision (*a*) for some of the more obscure problems of value, such as those connected with the shifting and ultimate incidence of the burden of taxes; (*b*) for the history of Economic doctrines; and (*c*) for mathematical problems in Economics and Statistics. These papers are optional, but there is nothing to prevent any student from taking all of them.

The second bifurcation has reference to the different groups of subjects which are included under the broad title "Economics." They are all intimately connected with one another. There is scarcely any of these which can be studied at all thoroughly without some considerable knowledge of almost every other. But yet each professional student according to his bent of mind, and each man of affairs according to his work in life, will wish to give his chief attention to certain branches; and accordingly while each of the four papers on Advanced Economics contains some general questions, the majority of the questions in each paper are divided in about equal proportions among the four groups:—A, *Structure and Problems of Modern Industry;* B, *Wages and Conditions of Employment;* C, *Money, Credit, and Prices;* D, *International Trade and its Policy.*

A and B will be of special interest to those who expect to be employers of labour, or landowners, or to be engaged in the service of railways, or in the administration of government, central or local. C and D, together with the latter part of A, will meet the needs of those who are to be engaged in large financial transactions, as bankers, members of the stock exchange, etc.; while merchants and those members of manufacturing firms who are chiefly responsible for the external relations of the business rather than its internal organisation, will perhaps give their chief attention to D and part of either C or A. Those who expect to be engaged in the service of the poor will give the first place to B. The studies of any one who hopes to take part in legislation need to be broad; but he may reasonably specialise to some extent on one, or even two of the four.

The remaining subjects in Part II. lie outside the range of Economics, but are closely connected with it. They are all optional. Modern Political Theories will attract these who are likely to hold responsible political positions at home and abroad. The combination of economics, recent history, and political science with international law affords an introduction to the diplomatic and consular services. And lastly the fusion of economic and legal studies, which has given good results in Germany, the United States, and other countries, may perhaps be promoted by the optional papers on the Principles of Law.

Instruction in some of the subjects is given for the present not in lecture, but by personal guidance and advice as to reading. A. M.

Since the foundation of the Economics Tripos in 1903, the number of students taking it has grown very greatly. The teaching staff has expanded correspondingly, and there are now, in addition to the Professorship of Political Economy, three University Lectureships in Economics and one in Statistics. The number of college teachers has also grown. In the light of experience the detail of the curriculum has been modified from time to time. At present Part I. of the Tripos is devoted to general economics and to recent economic and general history; and in Part II., while all candidates are required to take one paper on economic principles, and one on public finance, it is open to them to devote the main part of their time *either* to more advanced work in economics *or* to political science, international relations, and international law. Provision was made for bifurcation in these two directions in the original plan of the Tripos, but recently the dividing line has been drawn more sharply.

A. C. P.

Economics, Teaching at Oxford. The subject presents the following questions: To what ends is the teaching of Economics at Oxford directed? by whom is it given? to whom, and in what manner?

1. Success at examinations is for the most part the object directly aimed at. Doubtless

there is an admixture of higher motives, and learning is not courted only for the sake of her dower. The examinations for which preparation is made are either instituted by the University or are external. The examinations at Oxford into which Economics enter pertain to the Final Honour school of Literæ Humaniores, the Honour school of Modern History, the Final Pass school, and the diploma in Economics. Candidates for Honours in Literæ Humaniores are examined, *inter alia*, in "the outlines of Political Economy." Out of some twelve papers one or two questions on one paper may bear directly on Economics. Those who have been taught to admire the Greek ideal of demonstrative knowledge are not encouraged to study the one department of Social Science in which deductive reasoning is practised with success. This deficiency is partly compensated by the permission which is given to candidates to offer "Political Economy with special study of two or more treatises" as an additional "special" subject. According to the statutes "in the arrangement of Honours great weight will be attached to excellence in a special subject." In spite of this assurance very few candidates for Honours in this school offer Political Economy as a special subject.

In the Honour school of Modern History a paper is set on "Political Economy with Economic History." But "candidates who do not aim at a place in the first or second class" may omit either this subject or Political Science. Additional weight accrues to Political Economy in this school when it is taken up as a "special subject." The curriculum for Political Economy as a special subject prescribes the study of two main topics—to give an example, International Trade and Public Finance have been chosen—partly in general treatises, partly by means of historical documents. For instance, under the head of Public Finance there are prescribed Bastable's treatise on the subject and a part of Wagner's *Finanzwissenschaft*, together with several parliamentary reports and speeches which throw light on the history of English finance from the beginning of the Napoleonic wars to the end of the 19th century. This curriculum may appear somewhat discontinuous; but it would be difficult otherwise to comply with the condition imposed on a "special subject," that it should be "studied with reference to original authorities."

The "Elements of Political Economy," taken along with certain other subjects, forms one of the avenues by which the student who does not aspire to Honours may *pass* to the degree of B.A. Candidates are examined in Walker's *Political Economy*, and selected portions—nearly twenty chapters—of Adam Smith's *Wealth of Nations*. They are also "expected to show an acquaintance with the chief facts of the economic condition of England at the present time."

For the diploma in Economics there is an examination at which five papers are set to each candidate,—two in Economic Theory, one in Economic History, and two in special subjects which the candidate selects out of three groups of special subjects, viz.: A. Either (1) some special branch of economic theory, or (2) some particular school of economic thought, or (3) the treatise of some leading economist, *e.g.* (*a*) the theory of rent, or (*b*) the Austrian economists, or (*c*) Ricardo's *Principles* (fifteen possibilities are enumerated). B. On some special period of economic history (*e.g.* the Industrial Revolution). C. Some special branch of applied economics (*e.g.* the statistical measurement of changes in prices). The number of pairs that can be made out of the alternatives specified in the published list amounts to 231; and candidates are not restricted to selection from the list. They have also the option of offering a dissertation in lieu of a special subject.

The principal external examination to which the efforts of economic students at Oxford are directed is that which constitutes the open competition for the Civil Service of India, clerkships (Class I.) in the Home Civil Service, and Eastern cadetships. Candidates are expected to possess a knowledge of economic theory as treated in the larger text-books, also a knowledge of the existing economic conditions and of statistical methods as applied to economic inquiries, together with a general knowledge of the history of industry, land tenure, and economic legislation in the United Kingdom.

Success in an examination is not the only tangible result at which students may aim. There is the Cobden prize for the best essay on a subject set every four years; there are the degrees of Bachelor of Literature and Bachelor of Science, which may be won by economic as well as other kinds of research.

2. The subdivision of the second head follows that of the first; so far as the *raison d'être* of the teachers is the preparation for examinations. Of the numerous courses organised by the Faculty of Literæ Humaniores one may occasionally relate to an economic subject. For instance, there was announced for the Hilary Term 1907 "Informal Instruction in the Relation of Economics and Ethics (Problem of Collective Bargaining)." The Faculty of Modern History gives more prominence to Political Economy. One or more of the ablest historical tutors usually deliver a course of lectures on Political Economy. A larger number of teachers, six or seven at a time, are told off to assist candidates for the Final Pass school. In all these cases the teacher is usually a tutor in, or otherwise intimately connected with a particular college; but the benefit of his teaching is extended to members of other colleges by a kind of intercollegiate exchange which is not without economic interest. The diploma in

Economics also calls forth teachers, some addressing themselves to the general part of the examination, some to the special subjects.

This classification of teachers does not comprehend the professor of Political Economy who is not tied down to any particular course. But he must not reckon upon an audience if he ignores the motive by which students are mainly attracted to lectures. The present professor usually lectures on one or two of the subjects prescribed for some of the examinations which have been mentioned, as well as in other subjects adapted to the needs both of those who are preparing for examinations and those who aim at higher objects. That there should be only one professorial teacher of so important a subject as Political Economy in so large a university as Oxford is an anomaly which has at length been mitigated by the creation of a lectureship in Economic History, the first holder being Mr. L. L. Price of Oriel College. The subject is also taught by many private teachers.

3. The persons taught at Oxford are mostly undergraduates, destined in due time to take the degree of B.A. by way of a Pass or an Honour examination. But to this general statement there are important exceptions. The Rhodes scholars are undergraduates *sui generis*; some of whom can only spend a year or two at Oxford, and so cannot take a regular degree—but at most a diploma. The diploma in Economics is open to students who are not members of the university, provided that they have pursued an approved course of study at Oxford. Also, men who have qualified themselves for the degree of B.A. by taking Honours in Literæ Humaniores may afterwards read for Honours in Modern History. Men who have taken Honours in either of these schools may afterwards read for the diploma in Economics. Women may undergo all the Oxford examinations which have been mentioned. In the case of the diploma they receive the same recognition as the men. In the case of the Honours Schools they are arranged in classes like the men. They are now (1924) admitted to all but Divinity degrees on the same terms as men. Among exceptional classes of students should be mentioned visitors from other academic worlds who occasionally attend the lectures of the professor. Mention may also be made of the students at Ruskin College, at present numbering fifty or sixty. They are usually members of the working class, often selected as men of mark by trade unions.

4. The commonest method of teaching is the lecture. Lectures are not usually interrupted by questions and answers. The advantages of dialectic, considerable in the case of economics, may be obtained by the "informal instruction" which often supplements lecturing. The teacher usually has read to him by the pupil—sometimes himself reads—an essay written on a subject of the kind set in the schools. The teacher then comments on the paper, correcting the form and adding to the matter. Sometimes two men with two papers will attend simultaneously, or a larger number may assemble for the discussion of a paper read by one of them, after the manner of a seminar. Doubtless it is a great advantage to a student to obtain for an hour, or even a shorter period, the full attention of a first-rate teacher. On the other hand, numbers have a certain stimulating effect. Moreover, the distribution of knowledge on a large scale economises the labour of the teacher. The Modern History tutors discharge many of the functions which in foreign universities devolve upon professors. To impose exhausting work on these tutors is to diminish the efficiency of economic teaching at Oxford.

F. Y. E.

[The most important change in the regulations relating to the study of Economics at Oxford which has occurred since the date of the preceding article, is the institution of the Honour School of Philosophy, Politics, and Economics. The subject to be studied is described as "the structure and the philosophical, political, and economic principles of Modern Society." The examination is so arranged that candidates may give special attention to any one of the three subjects of this group.

Those who specialise for Economics will be expected to show a knowledge of economic theory and of its history and its application. They will be examined in certain prescribed books and a so-called "further subject." The prescribed books are Adam Smith's *Wealth of Nations*, the Works of Ricardo, Marx's *Capital*, Vol. I., Jevons' *Theory of Political Economy*; List, the *National System of Political Economy*.

The "further subject" is one of the following: Currency and Banking, Capital and Labour, Labour Movements from 1815 to 1875. The results of the first examination which has been held are reported to be encouraging.

The Diploma in Economics, described in the above article, has been transformed into the Diploma in Economics and Political Science, with corresponding changes in the curriculum.]

F. Y. E.

Economic Teaching in the United States. The teaching of economics as a university discipline is essentially a modern development. The first professorship of the subject was at Columbia College, New York, where John M'Vickar was made professor of Moral Philosophy and Political Economy in 1819. The second professorship was at South Carolina College, Columbia, South Carolina, where Thomas Cooper, professor of Chemistry, had the subject of Political Economy added to the title of the chair in 1826. The first professorship of Political Economy was established at Harvard College in 1871, and at Yale College in 1872, although the subject had

been taught at Harvard by Francis Bowen since 1853.

Comparatively little attention was paid to economic questions apart from the problems of currency and free trade until after the civil war (1861-65). The new economic problems which forced themselves upon the attention of the country after the crisis of 1873 led to the migration of a number of young men to Germany to study economics. With their return in the years 1878-85, rapid additions were made to the body of instructors in the larger institutions, and a number of new chairs were created. Since then the interest in economics has spread throughout the length and breadth of the land, until at the present time most of the several hundred colleges in the United States afford instruction in the subject, while the larger institutions have a staff of instructors devoted to it. At institutions like Columbia, Harvard, Yale, Chicago, and Wisconsin, there are from ten to twenty professors of Economics and Social Science, together with a corps of lecturers, instructors, and tutors.

The character of the instruction in economics in the United States varies largely with the institution. In the smaller colleges the courses are confined to one or two years of text-book work, and the instructor must devote so much time to teaching separate sections and to administrative work that there is comparatively little leisure for original research or productive work. In the larger institutions ample opportunities are afforded not only for a specialisation of courses on the part of the students, but also for scientific output on the part of the professors. In this respect, however, the American institutions are still in process of transition. There is being built up on the basis of the undergraduate or college department, which gives the degree of A.B., the post-graduate work, which in some places is called the strictly university work, leading to the higher degree of A.M. and especially to that of Ph.D. In such places an increasing share of the attention of the professors is thus being devoted to the post-graduate or strictly university work. In only one institution, *i.e.* Columbia University, is the line drawn at all strictly. Here one-third of the entire force, seven out of the twenty professors, have seats only in the University Faculty of Political Science, and not in the undergraduate or business departments; and their work is confined to strictly post-graduate work. In most of the other great institutions the college still plays so large a part in the whole that a far more considerable share of the instruction is devoted to the undergraduates.

A striking development of the past decade is the creation of schools or faculties devoted to preparation for a business career. These are known by various names—school of commerce, school of commerce and finance, school of business, school of business administration, and the like. They are now found in many of the leading universities. Some limit themselves to so-called undergraduate teaching, some include post-graduate or research work, and one (Harvard) devotes itself solely to graduate instruction. Several of these schools have now started bureaus of research under various names: bureau of business research (Harvard, Illinois, North-western); bureau of industrial research (Pennsylvania).

Another recent development is the creation of bureaus of economic research in general, devoted primarily to the quantitative analysis of economic facts. Some of these, like the Harvard committee of economic research, are connected with the universities; others are independent of the universities and are able to dispose of large resources. Prominent among such bureaus are the National Bureau of Economic Research; the Institute of Economics, the Pollak Foundation, the National Industrial Conference Board, the Institute of Land Economics.

Owing to the great expansion of facilities separate courses are now delivered in most of the leading universities on various detailed questions of economics. These may be classified as follows:—

1. Economic History and History of Economics.—Such are courses, on the one hand, on the financial history of the United States, the industrial history of the United States, the tariff history of the United States, and the economic history of Europe in general and of the various European countries in particular; and, on the other hand, courses on the general history of economics, with special courses on the English economists and the foreign economists.

2. The General Theory of Economics.—Here we find preliminary and advanced courses on general principles, and especially courses on the theories of distribution. Here also belong the various courses on mathematical economics, on the theory of statistics, and on statistical practice.

3. Practical Economic Questions.— Such are courses on agriculture, on money, on labour, on transportation, on trusts, on domestic and foreign trade, on banking, on insurance, on crises, on public finance, and the like.

4. Business Administration.—Here we find courses on private finance, insurance, transportation, business administration and accounting, and on the principles of accounting, private and public.

5. Courses on Sociology and Social Economy. —Among these are courses on the general principles of sociology, problems of social

legislation, of pauperism, of criminology, and the like.

The result is that in the largest institutions sometimes as many as sixty or seventy separate courses are offered.

The instruction for undergraduates is still largely given by means of text-book instruction. For the university work the instruction is almost exclusively by lectures supplemented by the system of "seminars" or special classes of advanced students meeting for research work under the direction of the professor.

The number of students in economics and social science has increased enormously in recent years. The American Economic Association publishes every year a list of the doctors' dissertations which are in progress. According to this list, the institutions having the largest number of advanced students working for a degree during the past few years are in the respective order: Columbia University, University of Wisconsin, Harvard University, Johns Hopkins University, and Cornell University. Several of the Universities also now publish series of studies on economic questions. Among these are the Johns Hopkins University Studies, founded in 1883; Studies of the School of Political Science of Columbia University, founded in 1891; the University of Wisconsin Bulletin, founded in 1904; and the Harvard Economic Studies founded in 1906. Virtually all of the academic teachers of economics are members of the American Economic Association, which has over three thousand members, and which holds annual reunions in various parts of the country. Of recent years the study of economics has also been introduced into the high schools. But the study is limited to the barest elements of the science, and is generally included in what is known as Civics, or a discussion of the framework and fundamental principles of government.

Altogether the outlook for the academic study of economics in the United States has never been so bright as it is at the present time, and the interest is increasing from year to year. E. R. A. S.

ENGEL, Ernst (1821-1896), born at Dresden, began life as a civil engineer, but in 1850 undertook the direction of the newly founded Royal Saxon Bureau of Statistics. In 1858 he resigned this post, and after the death of Dieterici, in 1859, was appointed in 1860 Head of the Prussian Bureau of Statistics, holding the office for twenty-two years, during which period he carried on the work with such energy, that the Bureau, up to that date little known, became a most useful institution of great value to the government and the country in general in all social and economic matters. He also edited a statistical journal and founded a "Statistical Seminary" for students. He retired from the Bureau in 1882, owing partly to disagreement with the government and partly to failing health, but continued to work in retirement. Though brilliant and full of enthusiasm, he was not always a strictly accurate thinker. His principal work was to stimulate and develop the study of statistics.

Among his works are: *Das sächsische Obererzgebirge und seine gewerbliche Bedeutung in Gegenwart und Zukunft*, Dresden, 1855.—"Der Arbeitsvertrag und die Arbeitsgesellschaft" (in the *Arbeiterfreund*, 1867).—"Die Industrie der grossen Städte, eine sozial-statistische Betrachtung" (in the Berlin municipal calendar and year-book, 1868).—*Die industrielle Enquête und die Gewerbezählung im deutschen Reich und im preussischen Staate*, Berlin, 1878.—*Die Gewerbezählung vom i. xii. 1875 und ihre Resultate*, Berlin, 1878. *Deutschlands Getreideproduktion, Brotbedarf und Brotbeschaffung*, Berlin, 1881.—*Das Rechnungsbuch der Hausfrau und seine Bedeutung im Wirtschaftsleben der Nation*, Berlin, 1882. (Vol. xxiv. of the *Volksw. Zeitfragen.*)—*Der Wert des Menschen.* Part 1: *Der Kostenwert des Menschen*, Berlin, 1883. (Vols. xxxvii. and xxxviii. of the *Volksw. Zeitfragen*, forming the first part of a work planned by him in 3 vols. *Domos*, of which nothing further has been published.) In the *Assekuranz-Jahrbuch*, "Ein praktisches Beispiel der Altersfürsorge," 1886, and "Die Tilgung der Erziehungsschuld," 1887.

He published many articles in the *Zeitschrift des Statistischen Bureaus des Königlich-Sächsischen Ministeriums des Innern*: "Der Nutzen der Statistik," 1855;—"Ueber die Bedeutung der Bevölkerungsstatistik mit besonderer Beziehung auf die 1855er Volkszählung im Königreich Sachsen und die Produktions- und Konsumtionsstatistik," 1855.—"Beiträge zur Gewerbegeographie und Gewerbestatistik des Königreichs Sachsen," 1856-1857.—"Der Wohlthätigkeitskongress in Brüssel im September 1856," 1850.—"Der Viehstand auf dem grossen und kleinen Grundbesitz im Königreiche Sachsen, ein Beitrag zur Beantwortung der Frage: Ist die Grosskultur oder die Kleinkultur dem Staate nützlicher?" 1857.

In the *Zeitschrift des königlich-preussischen statistischen Bureaus* he published many articles: "L. A. J. Quetelet, eine Gedächtnisrede, gehalten in der Plenarversammlung des ix. intern. statistischen Kongresses zu Budapest am i. ix. 1876," 1876.—"Wer ist Konsument? Wer Produzent? Zwei international-statistische Fragen, versuchsweise beantwortet," 1879.—He further published in the *Zeitschr. f. d. ges. Staatsw.* 1853, "Die amtliche Statistik und das statistische Bureau im Königreich Sachsen mit einem Blick auf die statistische Centralkommission in Brüssel"—in the *Bulletin de l'Institut internat. de statist.*, vol. ii., Rome, 1887, "Rapport sur la consommation comme mesure de bien-être des individus des familles et des nations";—vol. ix. Rome, 1895-96, "Die Lebenskosten belgischer Arbeiterfamilien früher und jetzt. Ermittelt aus Familienhaushaltrechnungen und vergleichend

zusammengestellt." A number of important German old statistical writings were collected by Engel and published in the *Compte rendu* of the ix. International Statistical Congress (Budapest, 1876-78).

[See *Economic Journal*, vol. vii., London, 1896.—*Handwörterbuch der Staatswissenschaften*, giving a complete list of his works, vol. iii. 1900.]

ENGELS, FRIEDRICH (1820-1895), born at Barmen, Rhenish Prussia, died in England, where he had lived for many years. The son of a wealthy cotton manufacturer, he was connected with the business for a considerable part of his life. In his economic activity he was closely associated with Karl MARX, and his most important work was his assistance in the publication of the second and third parts of *Das Kapital* by that author, of which only the first part had appeared during the life of Marx. The readers of that book will recognise how greatly it is indebted to Engels for being issued in an intelligible form. The *Communistic Manifesto* of 1848 was written by the two friends. Several of the works of Engels are published in English.

"Umrisse zu einer Kritik der Nationalökonomie," in the *Deutsch-französischen Jahrbüchern*, 1844, and again in the *Neue Zeit*, vol. ix., 1890-91.—*Die Lage der Arbeitenden Klasse in England*, Leipzig, 1st ed. 1845, reprint, Stuttgart, 1892. Translated into English, *The Condition of the Working Classes in England in 1844*, New York, 1887, with a preface and appendix, the latter published separately as *The Working Class Movement in America*, New York, 1887 ; London, 1888 ; in German as *Die Arbeiterbewegung in Amerika*. — "Einleitung über Freihandel," a speech delivered in Brussels, 1849, translated into English, "K. Marx, Free Trade," Boston and London, 1889.—*Die preussische Militärfrage und die deutsche Arbeiterpartei*, Hamburg, 1865. —*Der deutsche Bauernkrieg*, 1875.—*Zur Wohnungsfrage*, 3 vols., Leipzig, 1872 ; Zurich, 1887. —*Soziales aus Russland*, Leipzig, 1875.—*Die Entwickelung des Sozialismus von der Utopie zur Wissenschaft*, Berlin, 1891.—*Der Ursprung der Familie des Privateigentums und des Staats*, 1894.—From the *Neue Zeit* : "Ueber den Bürgerkrieg in Frankreich," vol. ix., 1890-91. — "In Sachen Brentano contra Marx wegen angeblicher Citatsfälschung," vol. ix., 1890-91.—"Marx und Rodbertus," vol. iii., 1885.—"Der Sozialismus in Deutschland," vol. x., 1891-92.—"Ueber historischen Materialismus," vol. xi., 1892-93.—"Die Bauernfrage in Frankreich und Deutschland," vol. xiii., 1894-95.—Besides his work with Marx mentioned above (Marx, *Capital*, revised and edited by F. Engels, translated into English by Moore and Aveling, London, 1887), he also assisted him in the following works, writing prefaces, introductions, etc.,—introduction to *Vor den Kölner Geschworenen 1849*, 1885 ;—introduction (on the history of the "Bundes der Kommunisten") to *Enthüllungen über den Kölner Kommunistenprozess 1851*, 1885 ;—introduction to *Lohnarbeit und Kapital*, 1891 ;—note on Brentano in *Kapital*, vol. i., 1890 ; —and note on Rodbertus in vol. ii., 1885 ;—note on Rodbertus in *Das Elend der Philosophie*, 1885 ; —also introd., with biography of the author and history of the Prussian peasantry, to Wolff's *Die Schlesische Milliarde*, 1886 ;—introduction, with biography of author, to Borkheim's *Zur Erinnerung an die deutschen Mordspatrioten*, 1888.

[See *Handwörterbuch der Staatswissenschaften*, with complete list of his works, vol. iii., Jena, 1900.]

ENGINEERING AND ALLIED INDUSTRY AGREEMENTS. An agreement, mutually adjusted from time to time by representatives of the employers and workers, has secured for the engineering industry during the past twenty-six years comparative immunity from serious labour troubles. Stoppages of work have certainly taken place, some of them over difficulties which appeared to be insurmountable, but in the end the main principle on which the original agreement was founded always remained intact.

The original agreement was made in 1898, after a prolonged stoppage which involved members of the Amalgamated Society of Engineers and other unions, the more important of which are now, with the A.S.E., the component parts of the Amalgamated Engineering Union. The negotiators on behalf of the employers were the Engineering Employers' Federation, which subsequently became the Engineering and the National Employers' Federations and is now the Engineering and Allied Employers' National Federation. It was entitled "Conditions of Management Mutually Adjusted and Agreed upon between the Federated Engineering Employers and the Allied Trade Unions," and contained eight clauses including, at the beginning, a formal assertion of the right of the employers to freedom of management, and at the end "Provisions for Avoiding Disputes."

It was agreed that employers should be free, if they chose, to employ any man whether he belonged to a Trade Union or not ; that piecework should be permissible at prices "fixed by mutual arrangement between the employer and the workman or workmen who perform the work" ; that overtime should be restricted to forty hours per man per four weeks except in certain specified circumstances which were assumed to justify no restriction at all ; that there should be no limitation in the number of apprentices ; and that the employers should "have the right to select, train, and employ those whom they consider best adapted to the various operations carried on in their workshops and to pay them according to their ability as workmen." The last of these provisions was a mutual finding of the parties on what is known as the machine question.

Far and away the most important part of the agreement was contained, however, in the

"Provisions for Avoiding Disputes," the effect of whose operation has been to stabilise the relations of employers and employees, and at the same time to conserve the funds and increase the membership of the Trade Unions. These provisions were in the original agreement as follows :—

"With a view to avoid disputes in future, deputations of workmen will be received by their employers, by appointment, for mutual discussion of questions, in the settlement of which both parties are directly concerned. In case of disagreement the local Associations of Employers will negotiate with the local officials of the Trade Unions.

"In the event of any Trade Union desiring to raise any question with an Employers' Association, a meeting can be arranged by application to the Secretary of the Employers' Local Association to discuss the question.

"Failing settlement by the Local Association and the Trade Union of any question brought before them, the matter shall be forthwith referred to the Executive Board of the Federation and the Central Authority of the Trade Union ; and pending the question being dealt with, there shall be no stoppage of work, either of a partial or general character, but work shall proceed under the current conditions."

In October 1907 this agreement was revised. Amongst the changes made was a reduction of the permissible overtime from forty hours per man per four weeks to thirty-two hours per man per four weeks, the specified circumstances in which there was to be no restriction remaining as before. The substance of the claim relating to the non-limitation of the number of apprentices was retained, but the Unions were conceded the right—if they desired to exercise it—"to bring forward for discussion the proportion of apprentices generally employed in the whole federated area."

Much the same course was followed in the redrafting of the provision for the manning of machine tools. The employers, however, undertook to "recommend to their members when they are carrying out changes in their workshops which will result in displacement of labour, that consideration should be given to the case of the workmen who may be displaced with a view, if possible, to retaining their services on the work affected, or finding other employment for them."

The principle of the "Provisions for Avoiding Disputes" was retained. But it was agreed, in addition, to be "competent for an official of the Trade Union to approach the Local Secretary of the Employers' Association with regard to any such question, or . . . for either party to bring the question before a Local Conference to be held between the Local Association of Employers and the Local Representative of the Trade Unions." The provisions were speeded up by fixing time limits for the holding of both Local and Central Conferences, and paragraphs were added stipulating how conferences should be constituted. To the "Provisions for Avoiding Disputes," as amended, several other organisations, including the Electrical Trades Union, subsequently became parties.

Early in 1914, the main agreement was determined so far as the Amalgamated Society of Engineers was concerned, other Trade Unions parties to the agreement intimating their desire for revision. In another arrangement, arrived at in April of that year, between it and the Engineering Employers' Federation, the main principles of the "Provisions for Avoiding Disputes" were reaffirmed. The provisions were further speeded up by shortening the time limit for local conferences and arranging for a central conference once a month.

Following on a dispute early in 1922, the Employers' Federation arrived at agreements in June 1922 with practically all the Trade Unions having members employed in the Engineering and Allied Industry.

In these agreements the general principle that the Employers have the right to manage their establishments and the Trade Unions have the right to exercise their functions is reaffirmed.

The procedure for dealing with questions arising is also provided for. In the case of (1) general alterations in wages, (2) alterations in working conditions which are the subject of agreements officially entered into, and (3) alterations in the general working week, such alterations shall not be given effect to until the appropriate procedure between the Federation and the Trade Union or Unions concerned has been exhausted. It is further provided that where any alteration in the recognised working conditions other than those specified contemplated by the management of a firm will result in one class of workpeople being replaced by another in the establishment, the management shall, unless the circumstances arising are beyond their control, give the workpeople directly concerned, or their representatives in the shop, not less than ten days' intimation of their intention and afford an opportunity for discussion, if discussion is desired, with a deputation of the workpeople concerned and/or their representatives in the shop. Should a discussion not be desired, the instructions of the management shall be observed and work shall proceed in accordance therewith. Should a discussion take place, and no settlement be reached at the various stages of procedure which are possible within the time available, the management shall, on the date intimated, give a temporary decision upon which work

shall proceed pending the recognised procedure being carried through.

The recognised procedure is shortly stated as follows:

1. Discussion between Management and workmen directly concerned.

2. Failing settlement discussion between deputations of workmen accompanied by their Organising Official and the Management accompanied by a Representative of the Federated Association.

3. Failing settlement discussion in Local Conference between Representatives of the Federated Association and Local Representatives of the Society concerned, and

4. In the event of no agreement at Local Conference discussion in Central Conference between the Executive of the Federation and the Executive of the Society concerned.

It is important to note that until the foregoing procedure has been carried through no stoppage of work, either of a partial or a general character, shall take place.

The agreements of June 1922 provide also for the recognition of shop stewards and institution of Works Committees.

Working conditions are the subject of separate agreements between the Federation and the Trade Unions, *e.g.* forty-seven hours working week; overtime and night-shift conditions; holidays; general principles to be observed in regard to systems of payment by results.

[See ARBITRATION BETWEEN EMPLOYERS AND EMPLOYED; CONCILIATION, BOARDS OF; CONSEILS DE PRUD'HOMMES; EMPLOYERS AND EMPLOYED; INDUSTRY, CAPTAINS OF; LABOUR AND CAPITAL; STRIKES; TRADE UNIONS; and also COPARTNERSHIP (above); TRADE UNIONS AND STRIKES; UNEMPLOYED, in Appendix to Volume III.]

ERROR, LAW OF.* The additional references appended to the article on AVERAGE are almost equally relevant to the present subject. The paper on "Observations and Statistics" in the *Transactions* of the Cambridge Philosophical Society, which was mentioned in the original article on AVERAGE, has been supplemented by a paper on the "Law of Error" in the *Transactions* of the said Society 1905, and a paper on the "Generalised Law of Error" in the *Journal of the Royal Statistical Society*, 1906. The application of the law to sampling is well illustrated in Bowley's Presidential Address to the British Association, 1906, reprinted in the *Journal of the Statistical Society*. The use of the law to test whether an observed difference between averages is significant of a real difference, or only accidental, is now largely practised by statisticians. But not much use has been made of the suggestion put forward in 1885 in two papers referred to in the preceding article, to the effect that in dealing with rates (ratios), in the concrete and outside the sphere of simple games of chance ("Bernouilli's theory not being applicable") recourse should be had to the Law of Error in the more general form which is applied to magnitudes other than ratios. F. Y. E.

EXPORTS, INVISIBLE. The large excess of imports over exports in the trade of this country has long been a subject of remark. How can the difference between these two sets of figures be accounted for?

The figures of recent years are as follows:—

	Total Imports.	Total Exports.	Excess of Imports.
	£	£	£
1900	523,000,000	354,000,000	*169,000,000*
1901	522,000,000	348,000,000	*174,000,000*
1902	528,000,000	349,000,000	*179,000,000*
1903	543,000,000	360,000,000	*183,000,000*
1904	551,000,000	371,000,000	*180,000,000*
1905	565,000,000	408,000,000	*157,000,000*
1906	608,000,000	461,000,000	*147,000,000*
1907	646,000,000	518,000,000	*128,000,000*
1908	593,000,000	457,000,000	*136,000,000*
1909	625,000,000	470,000,000	*155,000,000*
1910	678,000,000	534,000,000	*144,000,000*
1911	680,000,000	557,000,000	*123,000,000*
1912	745,000,000	599,000,000	*146,000,000*

The excess of the imports over the exports of the United Kingdom was larger in 1900 than in any year previous. This excess increases in the main progressively. To understand the real meaning of the phenomenon, we have, in the first place, to remember that while the value of the imports is correctly stated, the value of the exports is necessarily largely understated. The figures of the cost of the exports are taken from the declarations made either by the owner of the goods or the agent who forwards them for shipping abroad. It can neither include the profit which the exporter expects to make, nor the whole cost of conveying the goods to their destination. Into these heads many items are brought which few people unconnected with business are ever aware of. The cost of freight and agency is very large. Ships are very perishable. They become rapidly out of date; they require constant repair. The payment for freight provides, among other things, practically the cost of the construction, maintenance, and navigation of those powerful lines of enormous steamers which connect this country with the rest of the world. Sir R. GIFFEN, who gave the amounts received in this manner the name of "Invisible Exports," about 1904 estimated these in the form of earnings of ships, commissions, and brokerage as not less than £100,000,000 a year.

Besides these amounts which do not appear in our ordinary statistics, there are the pay-

ments of the annual interest due on the capital which was exported many years back and invested abroad. These are estimated as being some £60,000,000 a year. We need not pursue the subject further into detail, but we think that enough has been said to explain that the difference between the amounts of our exports and imports which occasionally puzzles the untrained reader of the official statistics of the trade of the country is largely a matter of account.

Sir R. Giffen, *Essays in Finance*, First Series 1880, Second Series 1886; Bell. — *Economic Inquiries and Studies*, two vols., 1904, Bell.

LIST OF ABBREVIATIONS USED IN INDEX.

Afr. = Africa
Afrn. = African
Amer. = America
Amern. = American
anc. = ancient
appl. = applied
arith. = arithmetic
arithl. = arithmetical
assoc. = association

Brit. = Britain, British

calcul. = calculation
centy. = century
char. = character
circ. = circulation
Co. = Company
compd. = compared
conn. = connected
const. = constitution
crit. = criticism
curr. = currency

Decl. = Declaration
decr. = decrease
decrg. = decreasing
def. = definition
deprec. = depreciation
diff. = difference
diffic. = difficulty
dimin. = diminishing
disadv. = disadvantage
disorgn. = disorganisation
dist. = distinguished
distr. = distribution
divis. = division
doctr. = doctrine

E. = east
econ. = economic, economics
Eng. = England, English
estab. = established
Eur. = Europe, European
expln. = explanation

Fr. = France, French
fr. = from

Ger. = German, Germany
gov. = government

hist. = history
Holl. = Holland

illustr. = illustrated
illustn. = illustration
inconv. = inconvertible
incr. = increase
Ind. = India, Indian
indep. = independent
infl. = influence
inher. = inheritance
instr. = instrument
int. = interest
introd. = introduced
introdn. = introduction
invd. = invented
Irel. = Ireland
irreg. = irregular
Ital. = Italian

jnt.-stk. = joint-stock

legisl. = legislation
liab. = liability

medvl. = mediæval
Merc. Syst. = Mercantile System
meth. = method
mod. = modern

N. = north
N.W. = north-west

Parlt. = Parliament
parly. = parliamentary
P.E. = political economy
princ. = principles
prodn. = production
prohib. = prohibition
Prot. = Protestant
protn. = protection

qual. = quality
quant. = quantity
quest. = question

reguln. = regulation
rel. = relation
restrd. = restricted
restrns. = restrictions
R.C. = Roman Catholic
Russ. = Russia, Russian

Sch. = School
sci. = science
Sc. = Scotch
Scot. = Scotland
secs. = securities
S. = south
Span. = Spanish
stan. = standard
stk. ex. = stock exchange
suspn. = suspension
Switz. = Switzerland
syst. = system

U.K. = United Kingdom
U.S.A. = United States of America

W. = west
wh. = which

Names of persons noticed in the Dictionary appear, in the index, in small capitals, as J. S. MILL: titles of other articles in heavy type, as Value; foreign words, not being titles of articles, and names of books, in italics, as *Villa, Wealth of Nations*. A colon indicates the end of the index-heading: individual references are separated by a semicolon; groups of references by .——

* An asterisk signifies that the article is in two parts, of which one is in the Appendix.

In each reference the number indicates the page, while the letter indicates a *division* of that page; *a* and *b* referring to the *upper* and *lower* halves of the *left*-hand column, *c* and *d* to the *upper* and *lower* halves of the *right*-hand column. Thus, Absentee: Evils of, 3 *d*, refers to page 3, the lower half of the right-hand column. The diagram subjoined shows the method followed:—

INDEX

Absentee: Evils of, 3 *d*, 4 *a*; income remitted by **Exports**, 3 *b*; J. R. M'Culloch on, 3 *c*, 623 *d*, 624 *a*; and **Middleman**, 3 *d*; J. S. Mill on, 3 *bc*; F. Quesnay on, 3 *c*; W. N. Senior on, 3 *b*, 4 *a*.

Abstinence: and econ. **Harmonies**, 4 *d*; element in **Profit**, 4 *d*; effect on **Value**, 761 *d*.

Abstract Method: T. Carlyle on, 228 *a*; compd. with Concrete, 5 *c*; **Dutch Sch.**, 657 *c*; J. S. Mill on, 5 *b*, 734 *d*.

Accumulation: J. Rae on effective desire of, 592 *cd*; Rate of, causes affecting, 7 *b*.

Adams, H. C.: 799 *a*-800 *c*, 809 *d*.

Administration: Areas of, 12 *ab*; and responsibility, **Board**, 156 *d*; of medvl. City, 11 *a*; P. M. Doria on, 633 *ab*; and **Economics**, 13 *d*-14 *c*; and Monarchy, 11 *bc*, 13 *bc*; and Norman Conquest, 11 *b*; and mod. Republics, 13 *c*; Theories of, 10 *bc*; Unpaid, 11 *a*.—**Administration**, Central, or **Bureaucracy**, Dangers of, 194 *a*; and Local, 10 *d*, 13 *ab*; Mod. hist. of, 11 *bcd*, 294 *cd*; Necessity of, 194 *b*; Powers, 13 *ab*; Principles, 194 *bc*; Scope, 250 *cd*; and Self-gov., 10 *d*, 250 *cd*, 513 *d*.

Ad valorem duties re-introduced: 15 *d*, 828 *b*.

Advances: and **Capital**, 16 *b*; **Physiocrats** on, 16 *a*; D. Ricardo and A. Smith on, 16 *b*; and **Wages**, 16 *b*.

Advowsons: **Abstract of Title**, 5 *a*; and **Patronage**, 130 *c*.

Aeroplane **Transport**: value of, 852 *a*.

African Companies, Early: 18 *d*, 19 *a*, 31 *c*, 271 *b*, 330 *a*, 375 *c*.

Agazzini, M.: on Medvl. Econ., 21 *a*; **Value**, and **Cost** of reproduction, 20 *d*.

Agnati: 22 *c*.

Agricultural Holdings: **Acts**, 26 *d*-27 *b*, 376 *ab*, 800 *c*-801 *d*; rights of landlords and tenants, 800 *c*-801 *d*; **Allotment**, hist. of, 32 *cd*., 269 *ab*; Large and small compd., 470 *d*-472 *a*; compensation for tenant's improvements, 376 *abc*.

Agriculture: and **Black Death**, 28 *c*, 152 *b*, 261 *a*, 407 *ab*, 710 *b*; **Cattle Plague Orders**, 234 *b*; T. Chalmers on, 256 *a*; **Depression** of, 563 *d*-565 *b*; D. Diderot on, 577 *d*; A. M. de Dombasles on, 628 *d*; H. L. Duhamel du Monceau on, 648 *d*; W. Ellis on, 693 *c*; P. Esterno's defence of, 755 *c*; A. F. von Haxthausen on, Danish, Ger., and Russ., 716 *bd*; W. Marshall on, 24 *a*; A. Young on, 90 *a*.—**Agriculture**, Anglo-Saxon, 27 *d*; Von Maurer's theory of **Mark**, 25 *d*, 359 *a*; F. Seebohm's theory of Roman *Villa*, 25 *d*, 26 *a*, 359 *b*.—**Board of Agriculture**, 1793, 29 *b*, 156 *d*-157 *c*; 1889, 29 *d*, 157 *c*-158 *a*; Scotland, 802 *a*.—**Chambers of Agriculture**, Organisation, 257 *cd*, 258 *a*; and **Taxation**, 258 *b*.—**Consular Reports**, 853 *bc*.—**Agriculture**, **Conversion of Arable to Pasture**, 15th and 16th centy., 28 *d*, 153 *ab*, 260 *d*, 406 *d*-407 *b*, 710 *b*; Present day, 49 *d*, 50 *a*, 407 *c*.—**Agriculture in England**, medvl. Church, 282 *d*; **Depopulation**, 14th centy., 552 *a*; Improvements, 18th centy., 29 *ab*; Natural tendency of, 49 *cd*; after Norman Conquest, 28 *b*; Progress, 17th centy., 28 *d*, 29 *a*; changes under Tudors, 28 *d*, 261 *b*, 722 *a*.—**Agriculture**, Fr., S. le P. Vauban on **depression**, 1707, 583 *a*.—**Agriculture**, Irish, J. Caird on, 833 *a*.—**Agriculture**, Medvl., **Day work**, 485 *d*; **Lammas** or communable lands, 24 *a*; importance of **Plough-team**, 551 *d*; **Precariæ**, 25 *b*; **Virgate**, 25 *a*; **Weekwork**, 25 *b*.—**Agriculture and Fisheries, Ministry of**, 801 *d*-802 *b*; **Cattle Disease Orders**, 234 *b*, 864 *b*-866 *c*.—**Agriculture**, Roman *Villa*, 26 *a*, 27 *c*.—**Agriculture**, Systems of, **Allmend**, 23 *d*, 361 *a*; Collective, 22 *cd*; Crofters, Scot., 23 *d*; **Enclosures**, 23 *b*, 24 *b*, 28 *d*, 29 *bc*, 32 *d*, 52 *b*, 157 *b*, 260 *d*, 359 *d*, 407 *ab*, 551 *b*, 552 *bc*, 709 *d*-712 *a*; **Manor**, 24 *d*, 25 *ab*, 28 *ab*, 37 *c*, 359 *bc*, 447 *b*-448 *b*; **Mark**, 25 *d*, 359 *a*; Mir, 22 *d*, 360 *c*, 361 *a*, 413 *b*; **Open field**, 24 *bcd*, 25 *c*; **Tribal**, or Celtic, 26 *bc*, 27 *d*, 47 *b*, 178 *ab*; **Village communities**, India and Java, 23 *bcd*, 360 *c*, 361 *a*.

Aliens: Act, 1905, 802 *b*-803 *a*; **Aubaine, droit d'**, 68 *abc*; **Détraction, droit de**, 68 *bc*, 572 *cd*; **Disabilities** of, 31 *d*, 587 *d*; **Immigration** of, 802 *bcd*; indebtedness of State to, **Drago Doctrine**, 867 *d*-868 *b*; **Naturalisation** of, 32 *a*; undesirable, 802 *cd*.

Alison, Sir A., on contracted **Curr.**: 32 *ab*.

Allmend, Switz.: 23 *d*, 361 *a*.

Allowance Syst., **Poor Law**, ill effects: 33 *b*-34 *b*.

Althusius, J.: on Society, origin of, 36 *cd*; **Trade**, State reguln. of, 37 *a*.

Altruism and Self-Interest: 37 *b*.

American Companies: 330 *a*.

American Economic Association, 883 *ab*; principles of, 809 *d*-810 *a*.

American Sch. of P.E.: Colonial period, 804 *cd*; C. F. Dunbar on, 809 *a*; English influence on, 806 *bcd*, 807 *ac*, 808 *a*, 809 *bc*, 810 *b*;

French influence on, 805 *bc*, 806 *bc*, 807 *d*, 808 *a*; German influence on, 809 *c*; Historical School, 809 *cd*-810 *a*; internal development, 806 *b*-807 *d*; T. Cliffe Leslie on, 809 *a*; and T. Malthus, 804 *b*, 805 *a*, 806 *b*, 807 *c*; Modern phase, 808 *d*-811 *c*; National beginnings and, 804 *d*-806 *b*; **Optimism and Protn.**, H. C. Carey, 38 *a*, 226 *c*, 804 *b*, 807 *cd*; Protectionism in, 805 *d*, 806 *d*, 807 *cd*; public services of, 811 *abc*; and D. Ricardo, 804 *d*, 806 *bc*, 807 *c*; and A. Smith, 804 *c*, 805 *c*, 807 *b*; Transition period, 807 *d*-808 *d*.

Amortisation: or **Sinking Fund**, 38 *b*.

Analytical Meth., and **Synthetic**: 38 *cd*.

Anarchism: M. Bakounin, 38 *d*, 84 *b*; and **International Working Men's Assoc.**, 38 *d*, 39 *a*; Princ. of, 39 *bc*.

Anderson, J., on **Rent**: 39 *d*, 40 *a*, 734 *b*.

Annuity: Analysis of, 41 *c*; Consolidated or Consols, 390 *c*; **Deadweight**, 486 *bc*; and **Interest**, 40 *d*; **Taxation** on, 41 *b*.——**Annuity, Life**, A. Demoivre on, 545 *cd*; J. de Witt on, 545 *a*, 657 *b*.——**Terminable Annuities**, Hist. of, 188 *b*; **Investment** in, 41 *d*; compd. with Perpetual, 41 *d*. 42 *ab*.

Anti-Corn Law League: 42 *cd*, 736 *b*; effect on F. Bastiat, 123 *b*; opposed by **Chartism**, 272 *a*.

Antoninus, St., on **Int.** and **Usury**: 43 *a*.

A posteriori meth.: 43 *b*.

Appleton, N.: on **Bank**, national, 43 *d*; **Wages**, 44 *a*.

Apportionment: of Benefits and burdens, 44 *d*, 45 *a*; **Rent**, 44 *bc*.

Apprenticeship: and **Articles**, 59 *d*; R. Coke on, 318 *d*; and **Gilds**, 45 *cd*, 430 *a*; Statute of, 45 *d*-47 *a*, 318 *d*, 430 *a*; and **Trades Unions**, 45 *d*, 46 *a*.

A priori meth.: 47 *d*; J. S. Mill, 383 *b*; D. Ricardo, 47 *d*.

Aquinas, St. Thomas: on **Charity**, 48 *d*; **Government**, 49 *b*; Infl. on econ. thought, 48 *a*; on **Int.** and **Usury**, 49 *ab*, 479 *cd*; **Jus naturale**, 48 *b*; **Property**, 48 *b*; **Slavery**, 48 *d*; **Taxation**, 49 *b*; **Trade**, 49 *a*.

Arbitration: compd. with **Conciliation**, 385 *c*; **Conseils de Prud'hommes**, 51 *d*, 385 *bc*, 389 *bc*; Diffic. of, 51 *bcd*; Legal provision for, 46 *c*, 51 *d*; Meth. of, 51 *c*.——**Arbitration, International**, 811 *d*-813 *b*; for recovery of contract debts from foreign state, **Drago Doctrine**, 868 *b*.——Price of **Land** compulsorily purchased, determined by, 33 *a*; between landlord and tenant, 376 *b*, 800 *c*, 801 *ac*.

Aristotle: on **Colonies**, 55 *c*; conception of **Econ. Sci.**, 53 *d*, 279 *d*, 280 *a*, 813 *cd*; financial ideas of, 812 *b*-814 *a*; on **Int.** and **Usury**, 54 *d*; **Money**, 54 *cd*, 55 *b*, 765 *b*; **Monopoly**, 55 *c*; defence of **Property**, 55 *c*; on origin of Society, 55 *abc*; **Trade**, 54 *d*; theory of **Value**, 54 *c*, 55 *b*, 762 *d*, 765 *b*; on **Wages**, 54 *d*; **Wealth**, 54 *ab*.

Arithmetic, Political: and **Demography**, 57 *a*; T. R. Malthus, 57 *a*; Sir W. Petty, 55 *d*, 56 *ab*, 731 *bc*; and **Physiocrats**, 56 *d*; study of **Population**, department of **P. E.**, 56 *bd*; L. A. J. Quetelet, 57 *a*; J. P. Süssmilch, 57 *a*.

Arithmetical Ratio, and T. R. Malthus: 57 *b*.

Armed Neutrality, and English **Trade**: 57 *cd*, 397 *a*.

Arrangement: **Deed of**, and **Bankruptcy**, 58 *bc*, 116 *d*, 527 *a*; crit. of Law of, 529 *a*; **Liquidation** under, compd. with Bankruptcy Act, 528 *cd*.

Artél: 59 *bc*, 413 *b*.

Artisan: D. Diderot's def. of, 577 *d*.——**Artisan**, medvl., and **Gilds**, 60 *b*; and **Land**, 32 *c*.

Assignat: P. J. Cambon on redemption of, 206 *d*; in **Revolution, Fr.**, an **Inconvertible Curr.**, 63 *abcd*, 206 *cd*.

Ateliers Nationaux: L. Blanc's, closed by H. Dussard, 655 *d*; and **Right to Labour**, 66 *a*; and Socialism, 66 *b*, 154 *ab*.

Atkinson, E., optimism of: 808 *c*.

Attwood, T.: on **Bimetallism**, 67 *d*; and Birmingham Sch., 67 *bd*; **Curr.** scheme, and **Chartism**, 271 *d*; on high Prices, 67 *b*; on evils of Resumption, 67 *c*.

Audit: of **Banks**, 70 *d*; **Charity**, 70 *cd*; **Exchequer**, 70 *bc*, 71 *d*-72 *b*; **Jnt.-Stk. Co.**, 70 *a*; **Railways**, 70 *b*, 71 *a*.

Augustinis, M. de, on theory of **Value**: 72 *cd*.

Australia: Commonwealth **Bank** of, 819 *bd*.

Austrian Sch.: and **Deductive Meth.**, 73 *ab*; and **Diffic. of attainment**, 582 *a*; and **Final Utility**, 73 *b*, 815 *b*-816 *b*; and **Value**, 73 *a*, 735 *c*, 763 *d*, 814 *cd*, 815 *abcd*, 816 *abc*, 825 *d*, 826 *a*.

Average: Maritime, and **Adjustment, Average**, 9 *cd*, 74 *d*-75 *c*; in **Statistics**, use and misuse, 74 *bc*, 818 *d*; Law of **Error**, 886 *bc*.

Babbage, C.: on Cheapness, effects of, 76 *b*; **Division of Labour**, 76 *b*, 609 *b*; Machinery and **Tool**, econ. functions of, 76 *c*, 77 *a*; **Manufacture**, 76 *b*, 77 *a*; **Method of P. E.**, 75 *d*, 76 *a*; **Statistics**, 75 *b*.

Bacon, F., on **Colonies**: 78 *cd*.

Bagehot, W.: on **Banks**, functions of, 79 *c*; **Employers**, 705 *b*; Eng. Const., 81 *d*, 193 *d*, 194 *a*; **Money Market**, 81 *ab*; **Money**, universal, 81 *bc*; **P. E.** as deductive sci., appl. to advanced societies, 79 *d*, 80 *abd*, 735 *b*; **Silver**, deprec. of, and **Bimetallism**, 81 *c*.

Bailey, S.: **Distance in Time**, 593 *d*; **Rent**, theory of, 82 *d*; **Value**, theory of, 82 *cd*.

Baines family: 83 *b*-84 *a*.——Baines, Sir E., on **Education**, national, 83 *d*; **Free Trade**, 83 *c*.

Balance of Trade, 84 *b*-88 *b*, 352 *c*, 724 *c*; N. Barbon on, 87 *b*, 120 *cd*; G. Berkeley on, 87 *d*; E. Burke on, 88 *b*, 195 *b*; R. Cantillon on, 87 *b*; J. Cary on, 230 *b*; Sir J. Child, 87 *d*, 277 *c*; C. Davenant on, 87 *d*, 484 *b*; D. Hume on, 87 *ad*, 732 *c*, 733 *c*; Sir R. Maddison, 723 *d*; E. Misselden on, 723 *c*; and **Money**, scarcity in Middle Ages, 85 *ab*; Sir D. North on, 87 *bc*; D. Ricardo on, 88 *b*; A. Smith on, 87 *d*-88 *b*; Sir J. Steuart on, 87 *b*; depends on Total commerce, 85 *b*.

Baldwin, S., **Budget** of: 830 *a*.

Balsamo, P., and A. Young's *Annals of Agriculture*: 90 *ab*.
Bandini, S. A., on improvement of Land, Tuscany: 91 *ab*.
Bankers, medvl., or royal usurers: Jews, 342 *c*; Lombards, 342 *c*.
Banking: Bank of Amsterdam, 104 *cd*, 559 *d*; Australian and Ind. banks, functions of, 97 *b*, 819 *b*-820 *b*; Charitable *montes*, 15th centy., and monts de piété, 213 *d*; Co-operative, 109 *a*-110 *c*, 412 *d*; Baron Corvaia, 432 *c*; Departmental, P. Esterno on, 755 *b*; Banks, early Eur., 103 *c*; Fr. conception of, 98 *d*; Functions of, 79 *c*, 91 *d*; Bank of Genoa, 104 *ab*, 559 *d*; Bank of Germany, gov. of, 99 *b*; Bank of Hamburg, 105 *a*-106 *b*, 559 *d*; Bank of Ireland, privileges of, 96 *d*, 97 *a*; Irish banks, 96 *b*-97 *a*; Land banks, Ger., 106 *d*-108 *d*; Bank of Middelburg, 106 *c*; Origin of banking, 93 *cd*; Post-office banks, 111 *bc*; Provincial, 93 *d*-94 *d*; Bank of Rotterdam, 106 *c*; Savings-banks, 110 *c*-111 *d*, 334 *d*, 649 *bcd*, 819 *b*; Bank of Sweden, 104 *bc*; Bank of Venice, 103 *d*, 104 *a*, 559 *d*.—Bank Act of 1844, suspn. of, and Crisis of 1847, 459 *a*, 461 *a*; Crit. of, 466 *a*, 735 *c*; and Curr. doctr. 113 *d*, 407 *d*, 472 *cd*, 623 *c*; Effects, 459 *a*, 463 *b*; Banks, British Colonies and Dominions, 97 *ab*, 819 *b*-820 *b*; English amalgamations of, 94 *cd*, 837 *d*.—Banks, Australia, State-owned, 819 *b*; Note issue, 819 *d*.—Canada, Branch syst., 102 *ab*; Chartered, 101 *ab*; Const. and powers, 101 *ab*; Hist. of, 100 *b*-101 *a*; Note issue, 101 *b*-102 *a*; State bank successfully opposed, 101 *a*.—South Africa, administration, 820 *bcd*; Note issue, 820 *c*.—Banks of Deposit, Amsterdam and Hamburg, 559 *d*; Athens and Rome, 559 *d*; Medvl., 559 *d*; U.S.A., 103 *ab*.—Bank Deposits, Australia, 819 *b*; Canada, 102 *c*; Eng., 94 *d*; Int. on, 94 *d*; Irel., 97 *a*; Popular banks, Italy, 110 *b*; Savings-banks, 111 *abc*; Australia, 819 *b*; Scot., 95 *d*.—Bank of England, Bill business of, 142 *a*; H. Chamberlen's opposition to, 257 *ab*; functions in Clearing syst., 92 *d*, 306 *d*, 308 *b*, 309 *d*, 837 *cd*, 838 *bc*, 839 *b*; position in Crisis of 1890, 464 *bcd*; in Crisis of 1914, 868 *d*-869 *b*; Currency Notes exchangeable for gold at, 860 *c*, 869 *a*; Deposits in, 92 *d*; Functions, 92 *b*, 93 *a*; Gov. of, 92 *cd*; and Panic, 463 *ab*; hist. of Reserve in, 92 *b*, 94 *b*; Reserves, 1857, 1866, 1890, 465 *b*; Suspension of specie payments by, 92 *b*, 868 *b*.—Bank of Eng., Foundation of, Econ. effects, 728 *c*.—Bank of Fr., advances to the State by, 98 *c*; Bill business of, 142 *b*; Branch syst., 97 *cd*, 98 *a*; Gov. of, 97 *bc*; expansion of note circulation of, 112 *d*; Joint-stock Banks, admission to Clearing House, 837 *c*.—Mortgage Banks, Crédit Foncier, Fr., 108 *b*, 454 *b*-455 *b*; assoc. of Landowners, Ger., 107 *a*; State, Ger., 108 *d*.—Bank Note, Convertibility of, 407 *d*; Denominations of, discussed, 548 *cd*; infl. on Prices, 453 *c*.—Bank Note Circ., Australia, 819 *d*; Canada, 1867, 100 *d*; Canada, present day, 101 *c*, 102 *c*; Eng., 94 *ab*, 112 *ab*; Fr., 97 *d*, 98 *c*, 112 *d*; Ger., 99 *a*, 112 *d*; Irel., 97 *a*, 112 *d*; Scot., 95 *c*, 112 *d*; South Africa, 820 *c*; Sweden, 99 *c*, 113 *b*; U.S.A., 99 *c*, 113 *a*-114 *b*, 820 *d*-822 *a*.—Bank Note Issue, N. Biddle on, U.S.A., 139 *d*; Sir R. Peel and Curr. doctr., 472 *cd*; Restrns. on, 93 *d*, 113 *cd*; Restrns. on, Ger., 99 *b*; D. Ricardo and A. Smith on, 113 *c*.—Banks, Popular, Ger., 109 *abc*; Italy, 109 *d*-110 *c*.—Banking Reserve, Bill as, 141 *b*; Canada, 102 *a*; effects of Eng. syst. on, 94 *b*; Ger., 99 *ab*; Silver as, 147 *b*; U.S.A., 103 *a*, 821 *b*, 822 *a*.—Banking, anc. Roman, Argentarii, 52 *d*, 170 *c*, 559 *d*; Mensarius, 559 *d*.—Banking, Sc., 95 *a*-96 *b*; Bank of Scotland, 95 *abc*; Branch syst., 95 *d*; banks, Chartered, 100 *ab*.—Banking, U.S.A., J. E. Bollman on, 162 *c*; T. R. Dew on, 573 *d*; Federal Reserve System, 113 *d*-114 *ab*, 820 *d*-822 *a*.—Banks, U.S.A., National, 102 *d*-103 *b*, 820 *d*, 821 *ad*, 822 *a*; N. Appleton on functions of, 43 *d*; and Exchange, internal, 777 *d*; note circulation of, 113 *a*-114 *ab*, 820 *d*, 821 *a*, 822 *a*.
Bankruptcy: Act of 1914, 506 *d*, 589 *b*; Board of Trade, 117 *a*, 824 *ac*; and Book-keeping, 165 *d*; Cessio bonorum, Roman law, 114 *b*; Compulsory Preference of payments, 381 *b*; Court, 448 *c*; Debtor's summons, 506 *cd*; Deed of Arrangement, 58 *b*, 116 *d*, 527 *a*; Discharge, 589 *ab*; Dividend, 607 *d*; Eng. law of, 116 *b*-118 *d*, 506 *d*; Sequestration, Sc. law, 114 *d*-115 *d*.
Barbon, N.: on Balance of Trade, 87 *b*, 120 *cd*; Credit, 120 *a*; on Interest, 120 *ab*; Land Banks, 119 *a*, 120 *d*; Money, 119 *d*, 121 *a*, 728 *d*; Rent, 119 *b*; Trade, 119 *c*, 120 *b*, 731 *d*; Value, 119 *cd*, 120 *a*, 121 *a*.
Barter: mod. form of, Clearing, 122 *b*; dist. from Exchange, 122 *c*; Inconveniences of, 122 *a*; law of Prices for, 816 *b*.
Bascom, J.: 808 *b*.
Bastiat, F.: J. E. Cairnes' crit. of, 124 *b*; on econ. Harmonies, 4 *d*, 123 *d*, 124 *a*, 674 *d*, 675 *a*; F. Lassalle's crit. of, 124 *c*; on Liberty, 123 *cd*, 675 *a*; Optimism of, 124 *ac*; influence on A. L. Perry, 808 *a*; doctrine of Services, 124 *b*; on Value, 124 *b*, 764 *a*.
Baudeau, N.: crit. of E. B. de Condillac, 746 *d*; articles in Ephémérides, 125 *bc*, 744 *a*, 745 *c*.
Baudi, C. di V., on landed Property, Italy: 125 *cd*.
Baxter, R. D.: on National Debt, 126 *cd*; Brit. Taxation, 126 *bc*.
Beccaria, C. B.: on Division of Labour, 127 *d*; "Greatest happiness of greatest number," 127 *d*; anticipation of T. R. Malthus, 127 *d*; on power of Self-Int. in mod. world, 128 *a*; anticipation of A. Smith, 127 *d*.
Benefice: Advowsons, 5 *a*, 130 *bc*; Land Tenures, medvl., 130 *ab*.
Benevolences: Voluntary Grants, 130 *d*.
Bentham, J.: on Bounties, 131 *d*; Colonies, 131 *d*; Education, 133 *c*; Final Utility, 133 *b*; "Greatest happiness of greatest number," 132 *d*; F. Hutcheson's anticipation of, 132 *d*; on Individualism, 133 *ab*; Int. and Usury, 131 *ab*; Laissez-faire, 133 *b*; econ. functions of Machinery, 132 *b*; National

Debt, 132 *a*; P. E., Art and sci. of, 131 *d*; Poor Law, 131 *c*; Population, 132 *a*; Projectors and industrial progress, 131 *b*; infl. on D. RICARDO, 133 *b*; compd. with A. SMITH as philosopher, 132 *d*, 133 *a*; on Taxation, 132 *a*; his form of Utilitarianism, 131 *c*., 132 *d*; on Wealth, national, sources of, 132 *b*.

Bequest: chief Eur. countries, 134 *bc*; Feudal law, 133 *d*; Roman Law, 133 *d*.

BERKELEY, G.: on Balance of Trade, 87 *d*; Money, conventional char. of, 135 *a*; Population, 135 *b*; the *Querist*, 134 *d*, 732 *a*; on Unproductive Consumption, 134 *d*; Wealth, theory of, 134 *d*.

Berlin Convention, 1908, on International Copyright: 423 *a*.

Berne Convention on International Copyright: 423 *a*.

BESOLD, C.: on Int. and Usury, 136 *a*; functions of Statistics, 135 *d*.

Betterment: and Local gov., 136 *cd*; Objections to, 137 *c*-138 *d*.

Bill: Accommodation, 6 *cd*; Blank credit, 155 *b*; Council, Ind., 442 *a*-443 *a*, 776 *d*; Cross drawing, 468 *b*; Decrg. use of, 141 *cd*; Domiciled, 632 *b*; of Entry, Customs duties, 742 *bc*; Exchequer, 784 *bcd*; of accommodation, Kite, 468 *b*; as banking Reserve, 141 *b*.—Bill Broking, Discount houses and Money market, 142 *ac*; compd. with Exchange broker, 140 *d*, 141 *a*, 778 *bc*; Meth. of, 140 *d*, 141 *a*.—Bill of Exchange, Acceptance of, 6 *b*, 144 *ab*; Act, 1882, amended, 1906, 822 *d*-823 *c*; Act, 1917, 823 *c*; Allonge, 32 *c*; Blank endorsement, 155 *b*.—Cheques, 273 *c*-274 *c*; effect of blank spaces left in, legal decisions, 823 *bc*; Crossed, 822 *d*-823 *b*; endorsement forged, risk of, obviated, 823 *b*; Fictitious payee, legal decisions, 823 *b*.—Bill of Exchange, Commercial Instr., 142 *d*, 346 *ab*; instr. of Credit, 145 *ab*, 453 *a*; Curr., mercantile, 144 *c*; Date of Drawing, 482 *cd*; Days of Grace, 144 *d*, 485 *d*; Delegation, 537 *d*; Delivery, 538 *c*; Discount on, 589 *d*; dishonoured, time of noting, 823 *c*; Drafts, Bankers', not Bills or Cheques, 823 *ab*; Drawee and Drawer, 6 *b*, 143 *b*-144 *d*, 640 *d*; Drawer dist. fr. Maker of Promissory Note, 145 *a*; Due Date, 648 *ab*; C. EINERT on, 690 *a*; Enfacement, 715 *b*; Eng. and Fr. law of, 143 *cd*; Estoppel, 756 *b*; Functions of, 143 *ab*; Indorser, 144 *b*; Inland and foreign, functions of, 142 *d*; in Irish Free State, 143 *a*; Maturity for, 144 *d*; in Northern Ireland, 143 *a*; Origin of, 143 *b*; Stamp duties on, 143 *d*; Title to, affected by forgery, 144 *d*.—Bill of Lading, 145 *b*; Indorsee of, 145 *c*.—Bill of Sale, 145 *d*.

Bimetallism: and Alternative Stan., 36 *b*; T. ATTWOOD on, 67 *d*; W. BAGEHOT on, 81 *c*; H. CERNUSCHI on, 835 *b*; L. H. COURTNEY and, 857 *cd*; Dutch Sch. on, 658 *d*; in Eng., 147 *a*, 735 *c*; and Exchange, international, 148 *ab*; in Fr., 147 *b*; W. S. JEVONS on, 36 *a*, 147 *cd*, 148 *d*, 149 *b*; and Latin Union, 36 *a*, 146 *d*, 147 *c*, 149 *a*; J. LOCKE on Stan. of Value, 147 *a*; W. C. MEES on, 657 *d*; compd. with Monometallism, 146 *d*; and Prices, 149 *b*; in U.S.A., 149 *ab*; L. F. M. R. WOLOWSKI, 276 *d*.—Bimetallism and Gold, Stan. of 1816, 147 *ab*; infl. on Value of, 148 *cd*.—Bimetallism and Money, Legal tender, 147 *d*; Bimetallism and Silver, Price of, 148 *cd*; Prodn. of, 148 *c*.

Birth-rate: Causes affecting, 150 *bc*, 823 *c*, 834 *cd*; compd. with Death-rate, 150 *d*, 493 *d*, 494 *a*; decline in, 823 *c*, 834 *cd*; and incr. of Population, 150 *d*, 834 *c*.

Black Death: and Land, cultivation, 153 *ab*, 261 *a*, 407 *ab*, 710 *b*; effect on Population, 152 *ab*, 288 *b*; and Rent, Labour, 28 *c*, 152 *bc*, 261 *a*, 407 *a*; and Wages, 28 *c*, 152 *cd*.

BLANC, J. J. L.: and Ateliers Nationaux, 66 *a*, 154 *a*; and organisation of Labour, 65 *c*, 153 *d*.

Blockade in International Law: Declaration of London and, 862 *cd*; Effective, and Decl. of Paris, 520 *c*; long-distance, 521 *c*; Neutral States, 57 *d*, 156 *abc*, 397 *a*, 520 *c*, 863 *abc*, 864 *a*; Paper, 520 *c*.

BODIN, J., on Gov.: 161 *a*.

BŒCLER, J. H., crit. of J. ALTHUSIUS and H. GROTIUS: 161 *c*.

BÖHM-BAWERK, E. v.: 825 *b*-826 *b*; on Capital and Interest, 816 *d*, 826 *a*; on orders of Goods, 815 *cd*; Taxation reform of, 825 *bcd*; theory of Value, 815 *d*, 816 *b*, 826 *a*; infl. on American Sch., 810 *bc*.

BOILEAU, E., on industries of Paris: 161 *d*.

BOISGUILLEBERT, P., precursor of Physiocrats: 162 *b*.

Bonded warehouses: and Customs duties, 164 *a*, 475 *d*; and Drawbacks, 163 *d*; and Dock, 612 *b*, 615 *d*; Warehousing syst., 163 *d*, 475 *d*, 657 *b*.

Book-keeping: Balance-sheet, 88 *c*-89 *d*; Cash-book, information given by, 231 *ab*; good, Commercial importance of, 164 *d*, 165 *d*; Debit and credit side, 165 *ab*; Logismography, new Ital. syst., 165 *d*-167 *d*.

BOOTH, C.: 574 *a*, 826 *b*-827 *c*; E. AVES collaborates with, 819 *ac*.

BOSANQUET, C.: on Bullion Committee, 169 *ab*; Exchange, variations in, 169 *a*; Prices, high, 18th centy., causes of, 169 *b*.

Bottomry, loan on: 169 *d*-170 *d*; and anc. Banking, 170 *cd*; and Insurance, Marine, 170 *ab*.

Bounties: J. BENTHAM on, 131 *d*; and J. B. COLBERT'S legisl., 171 *c*; and law of Dimin. returns, 173 *a*; compd. with Drawbacks, 640 *b*; and Free Trade, 172 *b*; and Merc. Syst., 353 *b*; J. S. MILL on, 171 *c*; Negative tax, A. A. COURNOT on, 172 *cd*, 446 *a*; Prices, effects on, 174 *ab*, 425 *cd*; D. RICARDO on, 171 *b*; J. B. SAY on, 171 *c*; A. SMITH on, 171 *b*, 173 *b*, 353 *b*.—Bounties on Sugar, Austria, Fr., and Ger., 172 *b*, 173 *b*-174 *c*, 827 *cd*; Conventions on, 827 *cd*; effects on Trade, 171 *cd*, 827 *d*-828 *a*.

Bourse: or Exchange, 174 *d*, 767 *b*; Bourse du Travail, 174 *d*.

Bowen, F.: 808 *a*; on Protn. in U.S.A., 175 *a*.
Bowles, T. G., opposes Declaration of Paris: 521 *b*.
Boycotting: and law of Conspiracy, 175 *c*; and Restrns. on Labour, 175 *c*.
Brands, state reguln. of Trade: 175 *d*-176 *b*.
Bray, J. F., and jnt.-stk. modification of Society: 177 *bc*.
Bright, J.: and repeal of Corn Laws, 179 *b*; and Laissez-faire, 179 *b*; and Land Legisl., Irish, 179 *b*.
Brit. S. Afr. Co.: 19 *d*, 20 *bc*, 326 *d*, 332 *b*.
British Trade: Commercial Intelligence, 845 *d*-848 *b*, 852 *bcd*; Dock accommodation and, 866 *cd*.
Broggia, A.: on Monopolies, 180 *c*; princ. of Taxation, 180 *bc*.
Broker: Bill, 140 *d*-142 *c*, 778 *b*; Change, Agents de, Fr. licensed, 261 *d*; Exchange or Foreign, 140 *d*, 141 *a*, 778 *bc*; Broker, General, 180 *d*; Broker, Stock, 181 *a*.
Brougham, H., Lord: on Free Trade, 181 *b*; Slavery, 181 *b*.
Bubbles: 17th centy., 182 *bcd*; South Sea, 30 *c*, 183 *abc*.
Buchanan, D.: crit. of D. Ricardo on Profit and Rent, 184 *ab*; theory of Wages, 184 *a*.
Buchez, P. Y. B., follower of C. H. St. Simon: 184 *c*.
Buckle, T. H., on Statistics: 185 *a*.
Budget: and Finances, Brit., 185 *b*-186 *a*, 781 *cd*; from 1912 to 1924, 828 *a*-830 *d*; Free Trade, 187 *d*, 188 *a*; Hist. of, 187 *d*-188 *c*, 828 *a*-830 *d*; Supplementary estimate, 186 *b*; and Terminable Annuities, 188 *b*; Workmen's or Family, 484 *d*.
Building Societies: Advances by, 188 *d*, 830 *d*; and Co-operation, 189 *c*; different Forms of, 189 *ab*; diminution in number, 830 *d*; compd. with Jnt.-Stk. Co., 189 *cd*; Statistics, 1870-1888, 190 *ab*; 1913, 1917, 1921, 830 *d*-831 *b*; effect of War on, 830 *d*, 831 *a*.
Bullion: transactions, and Betterness, 139 *a*; and Coin, exchange value of, 546 *cd*; Stan. of, 191 *a*; as measure of Value, D. Ricardo on, 562 *d*.——Bullion Committee, C. Bosanquet, 169 *ab*; G. Canning, 210 *d*; Curr., paper, basis and theory of, 191 *cd*; F. Horner, 191 *d*; Legal tender paper curr., 191 *d*, 860 *b*-861 *c*; Over-issue of paper, secs. against, 191 *bc*, 192 *a*; D. Ricardo, 192 *a*; N. Vansittart, 191 *d*.——Drain of Bullion, Causes, 637 *cd*, 868 *cd*; Meth. of meeting, 638 *bcd*, 868 *d*-869 *b*; effect on notes in Reserve, 639 *ab*; Statistics of, 638 *a*.——Bullion, Exportation of, G. de Malynes on, 723 *c*; T. Mun on, 723 *acd*, 730 *c*.
Bureau of Labour, U.S.A.: functions of, 831 *d*; Reports of, 832 *abc*.
Bureaucracy: W. Bagehot on, 194 *a*; Dangers of, 194 *a*; and Self-gov., 10 *d*.
Burke, E.: on Balance of Trade, 88 *b*, 195 *b*; on Doctrinaire, 624 *a*; Free Trade, 88 *b*, 195 *b*; Labour as Commodity, 195 *a*; Laissez-faire and legisl., 195 *b*; Prices, 195 *a*.
Butt, I.: on Capital, 832 *d*, 833 *a*; on Home Rule, 832 *d*; on marginal productivity theory of Interest, 832 *d*; on productivity theory of Wages, 832 *d*; on Wealth, 832 *d*-833 *a*.
By-Product: special case of Joint-Products, 197 *c*; Silver as, 197 *bc*; theory of Value of, 197 *cd*.

Cabet, E.: conn. with Carbonari, 198 *a*; Communism and *Icarie*, 198 *bcd*, 365 *d*; on Pensions, Old Age, 198 *c*.
Cairnes, J. E.: on Competition and non-competing groups, 202 *d*, 203 *a*, 378 *bcd*, 761 *b*; on Cost of Prodn., 203 *b*; Deductive Meth., 202 *ab*, 203 *b*, 525 *c*; Definitions, 534 *d*; Demand, measure of, crit. of J. S. Mill, 540 *b*; Gold, effects of Discoveries, 202 *c*; Laissez-faire, 194 *c*; Logical Meth., 202 *a*, 525 *c*; theory of Profit, 202 *d*; Slavery, 201 *b*, 202 *b*; Value, theory of, 203 *b*, 761 *a*; Wages Fund, 202 *d*, 203 *b*.
Call: Jnt.-Stk. Co., 203 *d*; Stk. Ex., 203 *c*.
Calvin, J.: on Gov., 204 *c*; Int. and Usury, 205 *bcd*; syst. of Poor relief, 205 *b*; defence of Property, 204 *d*; Sumptuary laws of, 205 *a*; on Taxation, 204 *d*; infl. on Genevan Trade, 205 *a*.
Cambon, P. J., on redemption of Assignat: 206 *d*.
Cameralistic Sci. and Finances: 207 *d*, 208 *a*.
Campanella, T., *Civitas Solis*: 208 *b*, 363 *b*.
Canals: Advantages of, 209 *b*; J. Brindley, 179 *c*; J. B. Colbert, 320 *a*.——Canada, 848 *b*.——Eng., competition with Railways, 209 *a*; controlled by Railways, 209 *a*; Canal Control Committee, 834 *a*; Royal Commission on, 833 *d*-834 *a*.——Panama Canal, 208 *d*, 458 *c*, 849 *b*, 850 *cd*, 851 *c*; U.S.A., 848 *d*, 850 *cd*.
Canning, G.: and Bullion Committee, 210 *d*; Corn Laws, 211 *c*; Curr., paper, basis and theory of, 210 *d*-211 *b*; on Econ. and politics, 211 *c*.
Canon Law: Jus naturale, 212 *a*; and medvl. Labourer, 212 *b*; on Property, origin of, 212 *a*.——Canon Law of Interest, and charitable Banks or *montes*, 15th centy., 213 *d*; Evasion of, 213 *a*-214 *a*, 217 *cd*; and Insurance, Marine, 213 *bc*; opposed by Merc. Syst., 725 *ab*; and Partnership, 213 *b*; and medvl. opposition to Usury, 212 *b*, 217 *c*.
Cantillon, R.: on Labour, conditions of, in 18th centy., 215 *c*; infl. on Physiocrats, 215 *a*; on Population, 215 *b*; Value, theory of, 215 *d*, 732 *c*.
Capital: among Agents of Prodn., 21 *c*, 218 *a*, 816 *d*, 817 *a*; C. Booth on, 827 *a*; Credit as element of, 452 *c*; Def. and nature of, 219 *a*; and Distance in time, 593 *b*; Dividend in rel. to, 222 *b*, 606 *d*; varying Functions of, 219 *abc*; Hist. of word, 221 *c*; effect of Intention on, 219 *d*; Meaning of word, 217 *c*; J. S. Mill on, 220 *d*; consisting in Money or its substitute, 220 *c*; dist. fr. Natural agents, 219 *bc*; source of Profit, 217 *d*; Reserve for future enjoyment, 218 *b*; Restoration of, T. Chalmers on, 256 *bc*; different Species of, 221 *a*; A. R. J. Turgot on, 217 *d*; and Unproductive Consumption, 218 *d*; Wage and Auxiliary, 220 *d*; and Wages Fund, 220 *d*.

—Doses of Capital, or Increments, W. S. Jevons on, 633 *d*; James Mill on, 633 *c*.—Fixed Capital dist. fr. Circulating, 220 *cd*, 222 *ab*; J. S. Mill on, 220 *d*; A. Smith on, 220 *cd*.—Immaterial Capital, productive Skill, 220 *ab*, 593 *b*.—Interest and, Austrian School on, 816 *d*, 817 *a*, 826 *a*.—Capital, Repayment of, Legal ruling, 222 *ab*; Necessity of, 221 *d*, 222 *cd*.

Capitalists compd. with Employers: 704 *d*.

Carafa, D.: defence of Farming of Taxes, 224 *d*; on Free Trade, 225 *a*; on Taxation, 224 *cd*.

Carbonari in Fr.: St.-A. Bazard, 127 *a*; P. J. B. Buchez, 184 *b*; E. Cabet, 198 *a*; transition period in hist. of Secret Societies, 225 *b*.

Carey, H. C.: on law of Dimin. returns, 585 *d*; rel. of physical to social Laws, 226 *b*; crit. of T. Malthus, 804 *b*, 807 *c*; econ. Optimism, 38 *a*, 804 *b*; on Population, movement of, 226 *b*; on Protn., 38 *a*, 226 *bc*, 804 *b*, 807 *cd*; crit. of D. Ricardo's doctrine of Rent, 226 *a*, 804 *b*, 807 *c*; on Value, 225 *d*.

Carey, M.: on Protn., 806 *d*.

Carli, G. R.: on Census, 227 *b*; Coinage, 227 *b*; Merc. Syst., 227 *b*.

Carlyle, T.: on Abstract meth., 228 *a*; Laissez-faire, 227 *d*; P. E., 132 *cd*, 227 *c*.

Cary, J.: on Balance of Trade, 230 *b*; Bank, national, 230 *b*; stan. of Coinage, 230 *b*; state reguln. of Trade, 230 *b*; Unemployed, 230 *b*.

Caste: Limits of, 232 *ab*; as Trade Unions, 232 *c*.

Catallactics, sci. of Exchange: 233 *c*, 735 *b*.

Cavour, Count C. B. di: on Free Trade, 237 *ab*; Laissez-faire, 237 *d*; and Manchester Sch. and Optimism, 237 *d*; on Protn., 235 *d*-236 *c*; Socialism in rel. to Protn., 236 *d*, 237 *a*; Wages Fund, 236 *c*.

Census: introd. by C. Abbot, 1 *ab*, 238 *c*; Act, 1920, Administrative importance of, 238 *b*, 243 *d*, 834 *c*; Early, 238 *b*; Eng., 238 *b*; International syst., projects for, 243 *b*; Irel., 239 *c*-240 *b*; Italy, 243 *a*; classification of Occupations, 238 *d*, 239 *bd*, 241 *a*, 247 *abcd*; Quinquennial, instituted, 834 *bc*; Reforms required in, 242 *ab*; classification of Religions, 240 *ab*; Russ., 242 *d*; Scientific importance of, 238 *c*, 243 *b*, 245 *d*; Scope of, 240 *b*, 244 *a*, 245 *a*; Scot., 239 *c*; Spain, 242 *c*; Sweden, 242 *bc*; U.S.A., 243 *d*-249 *b*; and Vital statistics, 238 *d*, 239 *bd*, 241 *cd*, 242 *ab*, 247 *bc*, 249 *a*, 834 *cd*; as statement of national Wealth, 248 *c*.—Census of Production, Acts 1906, 1917, 834 *d*-835 *b*; difficulties of, 835 *b*.

Census Office, U.S.A., 811 *b*.

Central gov.: Mod. developments of, 11 *bcd*, 194 *ab*, 294 *cd*; rel. to Municipality, 295 *cd*, 296 *bcd*.

Centralisation: compd. with Decentralisation, 513 *cd*; in Fr., 11 *b*, 13 *a*; in 19th centy., 11 *d*; and Self-gov., 10 *d*, 194 *a*, 250 *cd*.

Cernuschi, H., on Bimetallism: 835 *b*.

Certainty: and Int., 251 *c*; and Labour, 251 *c*; of Taxation, 251 *d*.

Ceva, G.: early Mathematical economist, 252 *cd*; on Value of Money, 252 *c*.

Chadwick, Sir E.: on Eng. Poor Law, 253 *b*; Sanitary reform, 253 *c*.

Chalmers, T.: on Agriculture, 256 *a*; restoration of Capital, 256 *bc*; law of Dimin. returns, 585 *d*; Econ. phrases, 256 *b*, 734 *c*; on Funding syst., 256 *ab*; follower of T. R. Malthus, 255 *c*; on P. E., 255 *bc*; syst. of Poor relief, 255 *b*; on Productive Labour, 256 *b*; Stationary state, 256 *c*; Taxation on Rent, 256 *a*; foreign Trade, 255 *d*; sources of national Wealth, 255 *a*.

Chamberlain, A., Budget of: 829 *abcd*.

Chamberlen, H., scheme for Land Bank: 257 *ab*.

Charity: St. Thomas Aquinas on, 48 *d*; Commission, hist. and objects of, 263 *b*; D. Diderot on, 578 *b*; Doles, crit. of, 266 *a*, 625 *d*, 626 *a*; Fathers on, 38 *c*, 39 *ab*; N. di Mattia on, 713 *bc*; L. A. Muratori on, 841 *d*; Charity Organisation, E. Denison's scheme, 267 *ab*; rel. to Poor Law, 267 *cd*, 594 *ab*; Public and private, scope of, 266 *bcd*, 267 *cd*, 268 *d*.—Charitable Endowments, Evils of: 263 *cd*, 264 *cd*, 265 *b*, 625 *cd*; Objects of, 264 *abc*, 713 *d*, 714 *ab*; legitimate Scope of, 265 *ab*; rel. of State to, 262 *d*.—Charity, State, Allotment: 32 *cd*, 269 *ab*; Dwellings, 269 *bc*, 660 *d*; national Education, 269 *d*; Objections to, 270 *bcd*.

Chartism: opposition to Anti-Corn-Law League, 272 *a*; and T. Attwood's Curr. scheme, 271 *d*; points of Charter, 272 *b*; and Christian Socialism, 280 *ab*; and Co-operation, 280 *b*; and Machinery, 271 *d*; F. O'Connor, 271 *d*.

Chastellux, F. J., Marquis de, and T. R. Malthus: 273 *b*.

Cheques: accounts settled by, at Clearing House, 837 *cd*; Crossed, 822 *d*-823 *b*.

Chevalier, M.: R. Cobden's treaty and Free Trade, 276 *c*; on Gold stan., 276 *d*; Sch. of C. H. St. Simon, 275 *c*.

Child, Sir J.: on Balance of Trade, 87 *d*, 277 *c*; Colonies, 277 *c*; Competition, 277 *b*; E. Ind. Co. and Free Trade, 277 *ab*; Int. and Usury, 725 *c*, 731 *a*; Poor relief, 277 *c*, 679 *d*.

Children's Employment, 835 *c*, 836 *d*.

Chrematistic or Money-making, Aristotle on: 279 *d*.

Christian Socialism: C. Kingsley, 280 *bc*, 735 *a*; J. F. D. Maurice, 280 *ab*, 735 *a*; E. V. Neale, 280 *b*, 735 *a*.

Church, medvl.: and Agriculture, 282 *a*-283 *b*; and Int., 212 *b*, 217 *c*, 719 *d*, 720 *bc*; and Slavery, 281 *a*-282 *a*.

Citizen: Anc., position of, 290 *a*, 291 *b*; Medvl., rights of, 290 *a*, 293 *a*; Mod., extension of rights, 295 *d*.

City, Anc., Decline of, 292 *a*; as Democracy, 291 *bc*; as Oligarchy, 291 *c*; Organisation of, 290 *cd*; Origin of, 290 *c*; Religious char. of, 291 *a*; based on Slavery, 291 *d*; Socialistic gov. of, 291 *b*; Unprivileged classes in, 291 *cd*; essential Weaknesses of, 291 *d*.—City, Medvl., Charters and liberties of, 293 *a*; represented in Council of realm, 293 *b*, 294 *c*; growth of, and Crusades, 470 *bc*; Decline of independence, 294 *d*; Development of, 11th

and 12th centy., 292 *d*; struggle with **Feudalism**, 292 *cd*; stronghold of Freedom, 292 *b*, 294 *b*; growth of **Gilds** in, 293 *cd*, 372 *a*, 428 *d*; Hist. of, illustr. by Ghent, 294 *d*; Peaceful char. of, 293 *a*; free Self-governing communities, 292 *d*, 293 *a*.—**City**, Mod., subordination to Central gov., 295 *d*; **Local gov.**, functions of, 296 *bc*; illustr. by Manchester, 296 *d*; Organisation of, 296 *a*.

Civil List: **Appanage**, 43 *c*; Apportionment of, 300 *d*; Hist. of, 11 *d*, 300 *c*; **Pensions**, 301 *c*.

Civil Service: Econ. aspects of, 14 *bc*.

Clark, J. B.: 810 *a*; *Distribution of Wealth* by, 810 *c*.

Classical Sch.: opposed by **Austrian School**, 814 *cd*, 815 *a*; W. Cunningham influenced by, 859 *d*; **Deductive Meth.**, 526 *a*; **Econ. man**, 303 *c*, 677 *a*; freedom the postulate of, 815 *a*; **Individualism** of, 814 *d*; and **Inductive Meth.**, 526 *a*.

Classification: Econ., Diffic. of, 304 *cd*; W. S. Jevons and J. S. Mill on, 303 *d*, 304 *a*; Scientific, value of, 303 *d*.

Clay, H.: on paper **Curr.**, 305 *c*; on **Protn.** in U.S.A., 37 *d*, 38 *a*, 305 *a*.

Clearing: mod. form of **Barter**, 122 *b*; on **Railways**, 311 *cd*; by **Stk. Ex.** dealers, 310 *b*, 487 *a*.—**Clearing** of Country **cheques**, Advantages of, 306 *d*, 308 *c*, 837 *cd*, 838 *ac*, 839 *d*; Meth. of, 307 *ab*, 837 *cd*.—**Clearing Houses**, 305 *d*, 837 *abcd*, 840*a*.—**Produce Clearing**, Beetroot sugar, London, 310 *d*; Glasgow, iron trade and warrant syst., 311 *c*; Liverpool, corn, cotton, and tea, 311 *c*-312 *b*; London clearings, 311 *b*, 837 *d*, 838 *a*, 839 *cd*; Princ. of, 310 *a*; **Silver** and London clearings, 311 *b*; U.S.A., oil and wheat, 311 *c*.—**Clearing Syst.**, functions of Bank of Eng. in, 92 *d*, 306 *d*, 308 *b*, 309 *d*, 837 *cd*, 838 *bc*, 839 *b*; Berlin, 309 *a*; restrd. use of, on Continent, 308 *d*; facilitates **Credit**, 454 *ab*; Economy of, 305 *d*, 306 *a*, 307 *c*, 310 *ab*; and **Exchange, internal**, 777 *d*; Hamburg, 309 *b*; London centre, 306 *b*, 837 *a*-840 *a*; Paris, 308 *d*; Provincial centres, 307 *cd*, 837 *d*, 840 *a*; Sc., and **Exchange of Notes**, 307 *d*, 778 *ab*; **Statistics** of, 309 *bcd*, 837 *d*, 838 *ac*, 839 *d*; U.S.A., 307 *d*; Vienna, 309 *b*.

Clement, S.: on **Competition** and **Prices**, 313 *a*; **Money** as a **Commodity**, 313 *a*.

Coaling stations, 851 *cd*.

Cobbett, W.: on paper **Curr.**, 315 *d*; **Free Trade**, 315 *c*; econ. functions of Machinery, 315 *d*; **Taxation**, 315 *cd*.

Cobden, R.: and **Commercial Treaties**, 276 *c*, 316 *bcd*, 354 *cd*, 355 *b*; **Corn Laws**, 316 *cd*; **Education**, 316 *b*; **Free Trade**, 316 *d*; **Laissez-faire**, 316 *b*; Non-intervention, 317 *a*; **Taxation**, 317 *a*.

Cognati: 22 *c*.

Coin: and **Bullion, Exchange** value of, 546 *cd*; quality of, and **Exchange**, J. Carey on, 230 *b*.

Coinage: **Abrasion** of, 2 *cd*, 548 *d*; **Alloy**, 34 *c*, 803 *d*-804 *a*; **Annealing**, 40 *cd*; **Assay**, 60 *d*-61 *c*; Canadian, 102 *c*; Carat syst., 35 *a*; G. R. Carli on, 227 *b*; **Clipped**, 17th centy., 313 *c*; right of **Crown**, 318 *bc*; **Debasement** of, 146 *a*, 498 *c*-501 *a*, 563 *b*, 722 *b*, 731 *d*; and **Latin Union**, 35 *bc*.—**Copper Coinage**, Eng., 421 *bc*; Sweden, 421 *d*.—**Coinage**, stan. of **Fineness**, Eng., hist. of, 35 *ac*; Mod. countries, 35 *bc*, 803 *d*-804 *a*.—**Coinage**, **Mint** charges for, **Brassage** and **Seignorage**, 176 *c*.

Coins: **Angel**, 40 *b*; **Anna**, 40 *b*; **As**, 60 *bc*, 499 *a*; **Ban**, 90 *d*; **Bezants**, 139 *ab*; **Carolus**, Eng., 228 *b*; **Carolus Dollar**, 228 *b*; **Cash**, 230 *d*, 231 *a*; **Cent**, 250 *b*, 515 *c*; **Centavo**, 250 *b*; **Centesimi**, 250 *b*; Centime, 250 *b*, 515 *d*; Centimo, 250 *c*; **Crown**, Eng. Gold, 468 *c*; **Crown**, Eng. Silver, 468 *d*; **Crown**, Swedish Gold, 422 *a*, 468 *d*; **Crown**, Swedish Silver, 422 *a*, 469 *a*; **Crusade**, 469 *c*, 644 *bc*; Daler, 422 *a*; **Daric**, 481 *a*; **Decime**, 518 *b*; **Denarius**, 499 *a*, 546 *d*; **Denarius Dei**, 547 *a*; **Denier**, 547 *abc*; **Dime**, 582 *d*; **Dinar**, 586 *b*; **Dizain** or Carolus, Fr., 611 *a*; **Doitkin**, 625 *a*; **Dollar**, Ger., 626 *b*; **Dollar**, Hard, Stk. Ex., 627 *b*; **Dollar**, Hong Kong, 626 *d*; **Dollar**, Maria Theresa, 628 *a*; **Dollar**, Mexican, or **Peso**, 328 *a*, 626 *d*, 628 *a*; **Dollar**, S. Amern. Republics, 628 *b*; **Dollar**, Spanish **hard**, 327 *ac*, 626 *b*, 627 *bc*; **Dollar**, U.S.A., of Account, 627 *a*; **Dollar**, U.S.A., Gold, 328 *a*, 626 *d*, 627 *c*; **Dollar**, U.S.A., Silver, 626 *d*, 627 *d*; **Dollar**, U.S.A., Trade, 627 *d*; **Double Florin**, 634 *d*; **Doubloon**, 327 *bd*, 634 *d*-635 *b*; **Drachma**, 498 *d*, 637 *a*; **Ducat**, 139 *b*, 635 *a*; **Ducat**, Fr., Spain, and Portugal, 644 *bc*; **Ducat**, Ger., 644 *a*; **Ducat**, Italy, 643 *d*; **Ducat**, Mod., 644 *cd*; **Ducat**, N. States, 644 *b*; **Eagle**, 667 *a*; **Ecu**, 679 *b*; **Eight-Piece** or Hard **Dollar**, 327 *a*, 626 *bc*, 687 *d*; **Escudo**, 634 *d*, 644 *c*, 754 *bc*; **Farthing**, 421 *bcd*; **Five-Franc Piece**, 627 *a*; **Florin**, Eng. Silver, 516 *b*; **Franc**, 500 *c*, 515 *d*; **Guilder**, 327 *c*, 773 *b*; **Guinea**, 546 *b*; Half-farthing, 421 *c*; **Halfpenny**, 421 *bcd*; **Half-sovereign**, 328 *b*; **Lepta**, 637 *a*; **Livre**, 500 *c*; **Macuta**, 450 *c*; Maravedi, 500 *c*; Marc, 500 *bc*; **Mark**, Ger., 515 *d*, 626 *b*, 644 *ac*; Miliarision, 139 *b*; **Penny**, Copper, 421 *bcd*; **Penny**, Silver, 499 *b*; **Peseta**, 627 *b*, 635 *b*; **Piastre**, 626 *d*; Plât, 421 *d*, 422 *a*; **Pound**, Eng., 499 *bc*; **Real**, 626 *b*; Rei, 500 *c*; **Rixdaler**, 422 *a*; **Rouble**, 515 *d*; **Rupee**, 328 *a*; **Sequin** or **Zecchin**, 643 *d*; **Sestertius**, 499 *a*; **Shilling**, 500 *a*; **Solidus**, 139 *b*, 499 *b*; **Sou**, 499 *b*, 500 *bc*; **Sovereign**, 2 *d*, 327 *d*, 328 *b*, 546 *a*; **Thaler**, 626 *b*; **Tokens**, hist. of, 146 *c*; Two-dollar, Newfoundland, 328 *b*, 626 *d*; Twopence, 421 *c*; **Yen**, 627 *a*.—Coins, Imaginary, or **Money of Account**: Bank money, Amsterdam and Rotterdam, 104 *d*, 106 *c*; **Candareen**, China, 210 *c*; **Ducat** banco, 103 *d*; **Mark** banco, 90 *d*, 105 *a*, 106 *a*.

Coke, R.: on **Apprenticeship**, Statute of, 318 *d*; **Free Trade**, 319 *a*; **Navigation Laws**, 318 *d*, 727 *b*.

Colbert, J. B.: and **Bounties**, 171 *c*; **Canals**, 320 *a*; Commercial legisl. of, 319 *cd*, 431 *a*,

634 *a* ; Financial syst. of, 319 *b*, 634 *a* ; attempt at reform of Fr. **Internal Customs**, 319 *c*.

Collectivism : M. BAKOUNIN, 320 *d* ; and **Collective Goods**, def. of, 320 *cd* ; **Socialism**, 320 *cd*.

Colonies : **Auction** of colonial wool, 69 *a* ; **Debts, public**, 324 *b* ; Econ. functions, 323 *cd*, 334 *bc* ; **Finances**, 324 *bc* ; and **Free Trade**, 323 *b*, 325 *abcd* ; rate of **Int.** in, 324 *bc* ; A. SMITH on colonial empire, 353 *c*.——**Colonies, Curr. in Brit.**, Areas, 328 *ab* ; Classification, 328 *c* ; Denominational, 328 *d* ; early Disorgn., 327 *ab* ; Paper, syst. of, 328 *b* ; **Silver** coins, introdn. of, 327 *c*.——**Colonies, Gov. of, by Companies**, 20 *a*, 326 *d*, 329 *b*-333 *a*, 845 *d* ; by **Crown**, 326 *c*, 841 *d*, 842 *a*-843 *b* ; grants to Lords proprietors, 330 *b* ; institutions common to, 842 *ab*, 844 *c* ; British Parliament, rel.to, 842 *bcd* ; Colonial Conferences, 843 *b*-844 *bd* ; Foreign Powers, rel. to, 842 *d*, 843 *b*, 844 *d* ; Imperial Unity and recent developments, 841 *b*-843 *b*, 844 *c*-845 *b* ; Mod. Brit. syst., 323 *b*, 333 *d*, 843 *a*-845 *b* ; Problems affecting, 322 *d*, 324 *d*-325 *d*, 333 *d*, 842 *cd* ; in Self-governing colonies, 326 *d*, 841 *a*-845 *c*.——**Colonies, Gov. of,** Old syst., 333 *d*, 350 *d*, 353 *c* ; Advantages of, 322 *d*, 323 *a* ; A. SMITH'S crit. of, 323 *a*, 329 *b*, 331 *c*, 353 *c*.——**Colonies,** Preferential trading with, 830 *d*, 845 *b* ; J. DAVIDSON on, 862 *b*.——**Colonies,** Trade Commissioners, 846 *cd*.——**Colonial Lands,** quest. of Ownership, 324 *a*, 469 *c* ; E. G. WAKEFIELD'S syst., 334 *a*.

Colonisation : Anc., causes for, 333 *b* ; ARISTOTLE on, 55 *c* ; F. BACON on, 78 *cd* ; J. BENTHAM on, 131 *d* ; and **Board of Trade**, 158 *b* ; Brit. Empire, syst. represented in, 322 *bc* ; Sir J. CHILD on, 277 *c* ; **Coolie syst.**, 322 *a*, 408 *c* ; and **Depopulation**, 277 *c*, 559 *b* ; **Emigration** syst., 322 *b*, 333 *c*, 696 *c* ; syst. of **Factories**, defects of, 321 *bc* ; Mod. motives for, 333 *cd* ; **Plantation** syst., hist. of, 277 *c*, 321 *d* ; Province syst., 321 *cd* ; and **Emigration**, E. G. WAKEFIELD on, 333 *d*, 334 *a*, 697 *ab*, 700 *d*.——Colonisation on Communist princ., E. CABET, 199 *b*, 366 *ab* ; R. OWEN, 365 *ab*.

Combination : obstacle to **Competition**, 377 *d*, 379 *b* ; and **Conspiracy**, 336 *bd*, 337 *a*, 390 *d*, 401 *a* ; **Co-operation** of consumers and producers, 336 *c* ; Mod. laws of, 336 *d*, 337 *a* ; and **Wages**, J. S. MILL on, 336 *b*.——**Combination,** Prohib. of, 18th centy., 336 *d* ; Medvl., 336 *c*.

Comfort, stan. of : and cheap **Food**, F. A. WALKER on, 337 *cd* ; J. S. MILL on, 338 *b* ; and movement of **Population**, 337 *bd*, 338 *a* ; Progressive conception of, 337 *c*, 338 *a* ; D. RICARDO on, and Socialist "Iron Law" of **Wages**, 337 *d*-338 *b*.

Commerce : and **Armed Neutrality**, 57 *cd*, 397 *a* ; Art and Sci. of, 351 *bc* ; and **Blockade**, 57 *cd*, 156 *abc*, 397 *a*, 520 *b*, 521 *abc* ; Brit., hist. of, 341 *a*-345 *c*, 722 *b* ; of Brit. Empire, statistics 1889-90, 340 *c* ; medvl., and **Cinque Ports**, 287 *d*.——**Chambers of Commerce,** Organisation of, 258 *d*, 592 *a*.——**Commerce,** Dept. of, U.S.A., 811 *b*, 832 *a*.——**Commerce,** Dictionary of, M. POSTLETHWAYT, 732 *b* ; R. ROLT, 732 *b* ; SAVARY family, 732 *b*.

Commercial Diplomatic Service : 846 *cd*.

Commercial **Dock Co.** : 612 *d*.

Commercial Instr. : **Bill**, 142 *d*, 346 *ab*, 822 *d*-823 *c* ; **Cheques**, 274 *a*, 346 *ab*, 822 *d*-823 *b* ; **Negotiable**, 346 *ab* ; **Promissory Note**, 346 *ab*.

Commercial Intelligence : 845 *d*-848 *b* ; organisation at Headquarters, 846 *bc* ; overseas, 846 *c*-847 *a*, 853 *bcd*.

Commercial Policy : of Charles II., 424 *b* ; J. B. COLBERT, 319 *cd*, 431 *a*, 634 *a* ; O. Cromwell, 286 *b* ; J. DAVIDSON on, 862 *b* ; Edward I., 342 *ac*, 374 *a*, 429 *d*, 721 *c*, 794 *bc* ; Edward III., 16 *d*, 372 *a*, 374 *a*, 721 *c*, 794 *c* ; Edward IV., 343 *c*, 423 *d* ; Edward VI., 372 *b* ; 18th centy., 396 *d*, 424 *cd* ; Elizabeth, 17 *d*, 18 *d*, 375 *c*, 430 *a* ; England in period of Napoleon I., 397 *a* ; Henry II., 341 *c* ; Henry III., 16 *c*, 341 *d* ; Henry IV., 16 *d*, 342 *d* ; Henry VII., 16 *d*, 17 *ac*, 375 *a*, 721 *d* ; Henry VIII., 17 *c*, 375 *a*, 794 *d* ; James I., 372 *c*, 723 *a* ; **Merc. Syst.**, 158 *c* ; Richard II., 342 *d*, 372 *a*, 731 *d* ; Richard III., 343 *c* ; William III. and Mary, 423 *c*.

Commercial Routes : development of Australia, 351 *a* ; growth of Brit. **trade**, 350 *b* ; Colonial syst., 350 *d* ; fall of Constantinople, 349 *bc* ; **Crusades**, 348 *d*, 469 *d* ; **Dock**, 616 *ab* ; Panama Canal, 208 *d*, 458 *c*, 849 *b*, 850 *cd*, 851 *c* ; rise of Holl., 350 *b* ; Suez Canal, 351 *b*, 616 *ab*.——**Commercial Routes,** Maritime, of Span. Arabs, 348 *cd* ; Greeks, 347 *d* ; **Hanseatic League**, 349 *ab* ; Phœnicians, 347 *cd* ; Portuguese to Ind., 349 *cd* ; Spanish to Amer., 349 *d*.——**Commercial Routes,** Modern, 848 *b*-852 *b* ; African, 849 *d* ; European, 849 *c*-850 *c* ; North American, 848 *c*-849 *c*, 851 *d* ; aeroplane transport, 852 *a* ; canals, 833 *d*-834 *b*, 848 *d*, 849 *abc*, 850 *cd* ; motor roads, 851 *d* ; ocean routes, 850 *c*-851 *d* ; railways, 849 *a*-850 *b* ; trainferries, 850 *bc*.——**Commercial Routes,** Overland, Anc., 347 *cd* ; Arabs, 347 *cd*, 348 *cd* ; Medvl., Italy and Ger., 349 *ab*, 350 *a* ; Roman, 348 *ab*.

Commercial Treaties : Arguments for and against, 353 *b*, 355 *abc* ; **Assiento**, 62 *d* ; and **Balance of Trade**, 353 *b*, 354 *b* ; of Charlemagne, 341 *a*, 354 *a* ; R. COBDEN on, 316 *bcd*, 355 *b* ; R. COBDEN'S, with Fr., 1860-66, 188 *a*, 276 *c*, 316 *b*, 354 *cd* ; Eden, 345 *b* ; **Intercursus Magnus**, 17 *a*, 343 *b* ; **Intercursus Malus**, 17 *a* ; **Methuen**, 344 *d*, 353 *b*, 354 *b* ; and **Reciprocity**, 354 *b* ; A. SMITH on, 353 *b* ; Utrecht (1474), 17 *bc*, 343 *b* ; Utrecht (1713), 62 *d*, 87 *a*, 345 *a*, 727 *d*.

Commissions : **of Enquiry**, Composition, 356 *a* ; sources of Information, 356 *b*.——**Commissions, Judicial**, Composition, 356 *d* ; Jurisdiction, 356 *d*.

Commodity, use of word by J. S. MILL, D. RICARDO, H. SIDGWICK, and A. SMITH, 358 *a*.

Commons : Eng. and Sc., 23 *d* ; Public int. in, 359 *d*-360 *b* ; rival Theories of, 358 *d*.

Commune : Mod. revival of, 361 *ab* ; of Paris (1871), peculiarity of, 361 *cd*.

Communication: means of, A. J. E. DUPUIT on, 654 *d*; and econ. Progress, 361 *d*.
Communism: Aims of, 362 *c*; F. N. BABEUF'S conspiracy, 77 *d*, 363 *d*; P. BUONARROTI, 192 *c*, 362 *c*, 363 *d*; E. CABET'S *Icarie*, 198 *bcd*, 365 *d*; T. CAMPANELLA'S *Civitas Solis*, 208 *b*, 363 *ab*; V. P. CONSIDÉRANT'S *La Réunion*, 852 *d*; C. FOURIER, 364 *a*; G. B. DE MABLY'S defence of, 363 *b*; T. R. MALTHUS' argument against, 367 *a*; J. S. MILL defended, 367 *b*; Mod. origin of, 362 *cd*; Sir T. MORE'S Utopia, 362 *d*; MORELLY'S scheme, 363 *b*; philanthropic, R. OWEN on, 364 *b*; PLATO'S *Republic*, 362 *c*; Practical quest., 367 *a*; and Revolution, Fr., 363 *cd*; H. SIDGWICK'S def., 367 *c*; compd. with Socialism, 366 *c*, 598 *a*.——Communism in Amer., Amana Society, 37 *b*; Economites, G. RAPP'S, 366 *d*; Icaria, E. CABET'S, 199 *bc*, 366 *b*; New Harmony, R. OWEN'S, 365 *ab*; other Societies, 366 *d*.
Companies, 355 *c*; Afrn., early, 18 *d*, 19 *a*, 31 *c*, 271 *b*, 330 *a*, 375 *c*; Amern., 330 *a*; Brit. E. Afr., 19 *d*, 20 *bc*, 332 *b*; Brit. S. Afr., 19 *d*, 20 *bc*, 326 *d*, 332 *b*; Commercial Dock, 612 *d*; Darien, 481 *abc*; Dutch E. Ind., 330 *a*, 350 *b*, 488 *a*, 670 *b*; E. Ind., 169 *c*, 271 *b*, 277 *a*, 326 *d*, 330 *a*, 331 *ab*, 343 *d*, 344 *bd*, 350 *b*, 353 *c*, 375 *c*, 483 *d*, 487 *d*, 582 *bc*, 650 *b*, 669 *c*-672 *d*, 693 *a*, 722 *d*, 723 *abc*, 726 *bc*, 728 *a*, 729 *bc*, 730 *c*; E. Ind. Dock, 612 *c*; E. Ind., Foreign, 319 *c*, 330 *b*, 670 *b*; Eastland, 18 *a*, 271 *b*, 375 *c*, 672 *d*, 673 *a*; Guinea, 18 *d*, 330 *a*; Hamburg, 18 *a*, 375 *c*; Hudson's Bay, 326 *d*, 330 *b*, 331 *c*, 611 *b*; India, Fr., 319 *c*, 330 *b*, 670 *b*; Merchant Adventurers, 16 *b*-18 *c*, 329 *d*, 343 *b*, 344 *b*, 374 *cd*, 722 *cd*, 725 *d*, 727 *a*; New England, 330 *a*; Niger, 19 *d*, 20 *b*, 332 *b*; N. Borneo, 271 *a*, 332 *b*; Railway, legislative powers of, 197 *a*; Royal Afrn., 19 *a*, 330 *bc*; Russia or Muscovy, 18 *ab*, 271 *b*, 330 *a*, 375 *c*; Sierra Leone, 19 *b*, 330 *b*, 331 *d*; South Sea, 182 *bc*, 271 *b*, 330 *b*, 404 *c*; Surrey Canal, 612 *c*, 615 *c*; Turkey or Levant, 18 *a*, 271 *b*, 330 *a*, 343 *d*, 344 *c*, 375 *c*, 669 *c*, 726 *b*, 728 *a*, 729 *b*; Virginia, 330 *a*, 331 *a*; W. Ind. Dock, 612 *abc*.——Companies, Chartered, 271 *a*; favoured by circumstances of Afrn. trade, 18 *cd*; gov. of Colonies by, 326 *d*, 329 *b*-333 *a*; as means of Colonisation, 19 *c*, 20 *a*.——Incorporation of Companies by special Act of Parlt., railways, etc., 369 *b*; by royal Charter, 271 *a*, 369 *a*; under Companies Acts, 369 *a*.——Jnt.-Stk. Companies, Articles of Assoc., 59 *d*; Audit, 70 *a*; Board of Trade Dept., 824 *ab*; compd. with Building societies, 189 *cd*; Call, 203 *d*; Capital fixed and circulating, 222 *ab*; Capital, repayment of, 222 *ab*; Commandite, société en, 338 *d*; issue of Debenture, 501 *b*; and Debt, 506 *bc*; Directors, duties of, 587 *abc*; Econ. effects of, 370 *ab*, 371 *bc*; Incr. of, since 1863, 369 *c*, 371 *a*, 852 *b*; Limited liab. enterprise and Act of 1862, 369 *b*; Registration of, 824 *a*; Shareholders, 203 *d*; Unlimited liab., 203 *d*.——Livery Companies, Hist., 372 *abc*; Income, 373 *ab*; Privileges, 372 *d*.——Companies and Partnership, compd., 335 *c*, 368 *ab*, 369 *cd*, 428 *b*.——Companies, Trading, compd. with industrial Gilds, 373 *d*, 429 *b*; Hist. of, 373 *d*, 728 *a*; Jnt.-Stk. and Regulated, 18 *b*, 722 *d*, 723 *a*; A. SMITH on, 18 *ab*.
Compensation: and Common Employment, 358 *bc*; for injuries, Damages, exemplary, nominal, and ordinary, 478 *d*, 479 *a*; Damnum Emergens and Medvl. view of Int., 479 *cd*; for Expropriation and seizure of Land, 375 *d*-376 *a*, 381 *bcd*, 797 *d*-798 *c*; for Land, nationalisation of, 376 *c*; for slaughter of diseased cattle, 865 *cd*; for Tenants' Improvements, 376 *abc*, 691 *b*, 800 *c*-801 *bd*; Workmen's, preferential payment of, 381 *b*; Workmen's, U.S.A., 811 *b*.
Competition: F. von BÜLAU on, 190 *cd*; and non-competing groups, J. E. CAIRNES on, 202 *d*, 203 *a*, 378 *bcd*, 761 *b*; Sir J. CHILD on, 277 *b*; Combination as obstacle to, 377 *d*, 379 *b*; Commercial, effects of, 376 *d*, 378 *c*; Credit essential to development of, 452 *b*; Custom as obstacle to, 377 *c*, 476 *c*; Dangers of, 379 *c*; Industrial, effects of, 377 *a*, 378 *d*; justifications for interference with, 379 *cd*; W. S. JEVONS on, 378 *c*; T. E. Cliffe LESLIE on, 378 *b*; J. F. D. MAURICE on, 280 *b*; J. S. MILL on, 378 *b*; and Prices, S. CLEMENT on, 313 *a*; D. RICARDO on, 378 *b*; and Self-Int., 377 *b*, 379 *a*; H. SIDGWICK on, 379 *ab*, 380 *a*; A. SMITH on, 378 *a*; econ. Utility of, 379 *ab*.
Comptroller-general of the Exchequer: 71 *d*, 72 *ab*.
COMTE, A.: Hist. Meth., 382 *d*, 383 *cd*; compd. with J. S. MILL, 383 *ab*; infl. on J. S. MILL, 382 *d*; Positivism and crit. of Deductive Sch., 383 *a*; Sociology, word invd. by, for Social Sci., 383 *a*; on Solidarity, 383 *a*; on Statics, social, and social dynamics, 383 *a*.
Conciliation: compd. with Arbitration, 385 *c*; Prud'hommes, *conseils de*, 51 *d*, 385 *bc*, 389 *bc*; and Trade disputes, 384 *d*.
Concrete Meth. of P. E.: compd. with Abstract, 5 *c*.
CONDILLAC, E. B. de: N. BAUDEAU'S crit. of, 746 *d*; on Industry, 385 *d*; on Utility and Value, 765 *c*.
Conscription, Econ. effects of: 388 *d*.
Consignee, Bill of Lading: 145 *b*, 389 *c*.
Consolidated: Annuities or Consols, 390 *c*.——Consolidated Fund: Const. of, 390 *a*, 781 *c*, 782 *ab*; Origin of, 390 *b*; and annual Supply, 389 *d*.
Conspiracy, law of: 175 *c*, 336 *d*-337 *a*, 390 *d*, 401 *a*.
Consular Service, under Dept. of Overseas Trade, 846 *d*; Reports of, 846 *d*, 853 *abcd*.
Consumer, protn. of: and Adulteration, 15 *b*; by Medvl. state, as to qual. and quant., 64 *d*, 79 *a*.
Consumption: and Distr., 394 *d*; and Laissez-faire, 394 *d*, 395 *a*; effects of Prodn. on, 394 *bc*; rel. to Prodn., 393 *c*, 394 *ab*; statistics of, and national Progress, 395 *bc*; A. SMITH on, 393 *c*; Utility as foundation of, W. S. JEVONS, 393 *d*; Wealth in rel. to, 393 *d*.——Consumption Goods, Marginal Utility of, 815 *cd*.——Unproductive Consumption, G. BERKELEY on, 134 *d*; and Capital, 218 *d*.

Continental syst.: and Amern. war, 398 *bc*; effects on Brit. trade, 398 *ab*; and Crisis of 1810-11, 456 *c*; Licenses, 397 *d*; effects on Napoleon, 398 *a*; Object of, 396 *d*, 397 *a*; Orders in Council, Eng. retaliation for, 397 *bc*.

Contraband: Decl. of London, 862 *b*-864 *a*; Decl. of Paris, 520 *bc*, 521 *b*; Hague Conferences and, 399 *b*; and Neutral states in International Law, 57 *d*, 398 *d*, 863 *bc*, 864 *a*.

Contract: Acceptance, 6 *b*; Breach of, Remedy for, and specific performance, 402 *bc*, 750 *d*; claims against a foreign State, Drago Doctrine, 867 *d*-868 *b*; confidence in, and paper Curr., 401 *b*; Econ. aspect of, 399 *c*; and *Ex post facto* legisl., 400 *c*; Freedom of, arguments for interference with, 400 *b*; and organisation of Labour and Capital, 401 *b*; Law of, 401 *d*; for purposes of Monopoly, and law of conspiracy, 400 *d*, 401 *a*; Mutual, of creditors, 116 *a*; Roman law of, 298 *b*; power of development of, and Society, 401 *c*.

Convention of Royal Burghs and Sc. Trade: 403 *abcd*.

Conversion: Colonial Stocks, Canada, 405 *d*; Cape Colony, 405 *d*; Ind., 406 *a*; New Zealand, 406 *a*.——Conversion, Foreign Stocks, Austria, 406 *ab*; Egypt, 406 *b*; Fr., 406 *b*; Mexico, 406 *b*; Peru, 406 *c*; Russ., 406 *c*; Spain, 406 *c*; Turkey, 406 *c*; U.S.A., 406 *cd*.——Conversion of National Debt, 404 *b*, 508 *d*, 509 *a*, 854 *c*-855 *c*; A. Smith on, 507 *ab*; and South Sea Co., 404 *c*.

Coolie syst.: Colonies employing, 408 *c*; and Asiatic Emigration, 322 *a*, 408 *cd*; and State interference, 408 *cd*.

Cooper, T., works of: 805 *c*.

Co-operation: Artél in Russ., 59 *bc*, 413 *b*; E. Aves on, 819 *c*; Sir T. Bernard an originator of, 135 *b*; J. J. L. Blanc's scheme for state-supported, 65 *c*; P. J. B. Buchez, 184 *d*; Building societies, 189 *c*; and Chartism, 280 *b*; Cité ouvrière, 288 *d*, 413 *a*, 415 *a*, 664 *d*; assoc. of Consumers, 336 *c*, 410 *ab*; Defence of, 419 *d*; Diffic. affecting, 411 *cd*; for Divis. of Labour, 409 *ab*; Educational work of, 418 *b*; Federal princ. appl. to, 419 *bc*; compd. with Industrial Partnership, 419 *d*; co-operative Industry, R. Owen and, 365 *b*; and Interdependence of industries, 409 *d*; Legisl. on, 280 *c*; J. F. D. Maurice on, 280 *b*; Mir in Russ., 22 *d*, 39 *b*, 360 *c*, 361 *a*, 413 *b*; Co-operation, Partial, Oldham Cotton-Spinning Companies, hist. of, 417 *a*-418 *b*; assoc. of Producers, distributive and manufacturing, 410 *c*; Profit-sharing and joint-stockism, 412 *b*, 419 *d*; Co-operation, Social aspects of, 418 *b*; Statistics, 410 *d*, 414 *c*, 415 *c*; co-operative Union, functions of, 418 *bc*; Wholesale societies, 411 *b*, 419 *bc*.——Co-operative Banking, Ger. and Italy, 109 *a*-110 *c*, 412 *d*; F. H. Schulze-Delitzsch, 412 *d*.——Co-operative Farming, Assington experiment, 413 *d*; Denmark, 412 *d*; Ralahine experiment, W. Pare on, 413 *c*; Recent experiments, 414 *a*-415 *b*; Statistics, 1891, 414 *c*; U.S.A., 412 *d*, 413 *b*.——Co-operative Workshops, Eng. hist. of, 415 *bc*; Fr., J. B. A. Godin's Familistère, 289 *a*, 413 *a*; Profit-sharing in, 416 *a*; condition of Workers in, 416 *c*.

Coparceners, inher. by: 420 *a*.

Copartnership: South Metropolitan Gas Co., history and working of system, 855 *c*-856 *a*; advantages of, over Profit-Sharing, 856 *a*; workmen shareholders and directors, 855 *cd*, 856 *a*.

Copernicus, N., on reform of Curr.: 420 *b*.

Copleston, E.: on Corn Laws, 421 *a*; "secular" Depreciation of Curr., effects of, 420 *cd*, 421 *a*; Poor Relief, 421 *a*.

Copyhold: Demesne tenants, origin of, 544 *bc*; Enfranchisement of, 422 *b*, 717 *b*.

Copyright: works of Art, 442 *d*, 487 *c*; Basis of, 423 *a*; Designs, 422 *d*, 571 *a*; Dramatic, 422 *d*; International, 422 *d*; Literary, 422 *cd*, 487 *c*; in U.S.A., 422 *d*.

Corbet, T., on princ. of Trade: 423 *c*.

Corn: Corn Laws, G. Canning on, 211 *c*; N. de la Mare on, 537 *c*; 18th centy., 424 *c*; E. Elliott on, 693 *b*; prohib. of Export, 423 *cd*; D. Graswinckel on, 656 *bc*; prohib. of Import, medvl., 423 *d*; and Sliding Scale of Charles II., 424 *b*; A. Smith on, 425 *d*.——Corn Laws, Bounty Act of 1689, effects, 423 *c*, 425 *abc*; A. Smith on, 425 *d*; T. Tooke on, 425 *d*, 426 *a*; A. Young on, 425 *d*.——Corn Laws, Repeal of, 424 *d*; J. Bright, 179 *b*; R. Cobden, 316 *cd*; Sir R. Peel, 42 *d*.——Price of Corn and deficient Harvests, C. Davenant on, 484 *c*.——Corn Rents, and Prices, hist. of, 426 *c*; in 16th centy., 426 *ab*.

Corporation: Aggregate, 161 *b*, 428 *a*; Corporations of Arts and Trades, 428 *c*-432 *b*; or Body Corporate, char. of, 161 *b*; Domicil of, 632 *a*; Corporation, Municipal, gov. and powers, 427 *cd*; compd. with Partnership, 428 *b*; Corporation, Sole, 161 *b*, 428 *b*.——Corporation Profit Tax, 829 *c*.

Cost: Comparative, and International Trade, 434 *bc*; rel. to Price, 434 *d*; or Relative, and theory of Value, 434 *c*.——Cost of Collection of Taxes, H. Fawcett on, 435 *a*, 436 *b*; Indirect compd. with Direct, 396 *ab*, 435 *c*-436 *c*; A. Smith on, 396 *ab*, 435 *a*; Statistics of 436 *d*, 437 *a*; in U.K., 435 *bd*, 436 *a*.——Cost of Production, J. E. Cairnes on, 203 *b*; and Diffic. of Attainment, 580 *abc*; Law of, 437 *d*, 816 *a*; and Price, 394 *c*, 434 *cd*, 437 *d*; and Rent, 438 *cd*; and Value, 434 *cd*, 438 *ab*, 580 *d*, 760 *d*, 762 *a*-764 *c*; and Wages, 437 *bc*, 438 *a*.

Cotton, Sir R. B., on Coinage: 441 *c*.

Cotton: Cotton Famine: Hist. of, 439 *cd*; and Indian export trade, 442 *b*; effects on Textile industries, 440 *d*, 441 *a*.——Cotton Industry, Wages in, 441 *b*.

Courcelle-Seneuil, J. G.: 857 *ab*.

Cournot, A. A.: on Bounties, 172 *cd*, 446 *a*; Curves syst. and theory of price, 445 *b*, 861 *c*; Demand schedules, 540 *d*; Mathematical Meth., 445 *b*; Monopoly, where advantage to public, 445 *d*; Price, variations in, 446 *bc*; Social revenue, 446 *c*; Taxation, 15 *d*, 446 *ab*; Utility and Value, 765 *d*.

COURT, P. de la: on Free trade, 447 *b*, 657 *b*; free Industry, 447 *b*, 657 *a*; Monopoly, 447 *b*, 657 *a*.
COXE, T.: on Commercial syst. for U.S.A., 450 *d*; Industrial census, 451 *a*.
Credit: Bankers' Advances, 453 *b*; by Book entry, 164 *d*; element of Capital, 452 *c*; Cash Credit, Sc. syst., 231 *c*; facilitated by Clearing syst., 454 *ab*; essential to development of Competition, 452 *b*; Cycle, term invd. by J. MILLS, 467 *bc*; Deferred payments and trust, basis of, 451 *bc*; Development of, Eng., Fr., and U.S.A., 142 *abc*; Eng. and Fr. systems, 143 *cd*; J. LAW and development of syst., 452 *c*, 732 *a*; Medvl. view of, 451 *c*, 721 *c*; almost unknown in Middle Ages, 85 *a*; infl. on Prices, 452 *d*; as Productive force, 451 *cd*; U.S.A. syst., S. COLWELL on, 335 *b*; and Value, N. BARBON on, 120 *a*.—Credit, Instrument of, Bank Note, 453 *cd*; Bill, 145 *ab*, 453 *a*; Cheques, 453 *d*; Foreign cheques, 454 *a*; Telegraphic transfers, 199 *d*, 442 *d*, 454 *b*.
Creditor, position of: 505 *cd*, 692 *ab*, 749 *d*.
Crises: general Causes of, 461 *bc*, 462 *bc*; Eng. and U.S.A. compd. with Fr. and Ger., 465 *c*; Spasmodic char. of, 465 *d*; T. TOOKE on, 456 *abc*, 457 *bcd*, 458 *acd*, 459 *c*, 466 *cd*.—Crises, Periodicity of, 461 *d*, 466 *b*; and Sunspots, W. S. JEVONS on, 461 *d*, 467 *ab*.—Crisis of 1792-3, caused by excess of Enterprise, 456 *b*; checked by advances of Exchequer Bill, 456 *a*.—Crisis of 1796-7, proposal for support of Credit, 456 *b*; scarcity of Money, 456 *b*.—Crisis of 1810-11, Continental syst., 456 *c*; speculation in Exports, 456 *d*; S. PERCEVAL, 457 *ab*; Statistics, 456 *d*, 457 *c*.—Crisis of 1816 and speculation in Exports, 466 *cd*.—Crisis of 1825, and depression of foreign Exchange, 457*d*; and S. Amern. speculations, 466 *d*; other Speculations, 458 *bcd*; Statistics, 458 *a*.—Crisis of 1836-7 in Amern. and E. Ind. trade, 458 *d*; Railways, speculation in, 466 *d*.—Crisis of 1847 and Sir R. PEEL's Bank Act, 459 *a*; Suspn. of Bank Act, 461 *a*; Causes, 459 *d*, 467 *a*; Railways, speculation in, 459 *b*-460 *b*, 467 *a*; Statistics, 459 *c*-461 *a*, 463 *d*.—Crisis of 1857, over-extension of Credit, 462 *d*; Statistics, 463 d.—Crisis of 1866, compd. with 1857, 464 *ab*; subsequent Effects, 464 *bc*; Statistics, 463 *d*.—Crisis of 1890, position of Bank of Eng., 464 *bcd*; Barings, 462 *b*, 464 *d*; compd. with previous Crises, 462 *ab*; effects on Stk. Ex., 462 *b*, 464 *d*; Crisis of 1914, Drain of Bullion, 868 *c*-869 *b*.
Crusades: and City, medvl., growth of, 470 *bc*; development of Industry, 470 *a*; revival of Mediterranean trade, 348 *d*, 469 *d*.
Culture, small: Advantage and disadv. of, 471 *bcd*; Statistics, in Eng., 471 *a*.
Currency: C. F. ADAMS on, U.S.A., 9 *b*; T. ATTWOOD's theory, 67 *c*, 271 *d*; early Canadian, 100 *c*: Circulating medium, Eng. syst., 288 *bc*; in Colonies, 326 *d*-329 *b*; Contracted, Sir A. ALISON on, 32 *ab*; and Conventional Tariff, 403 *d*, 404 *a*; N. COPERNICUS on, 420 *b*; E. COPLESTON on "secular deprec." of, 420 *d*, 421 *a*; and Custom, 477 *bc*; B. DAVANZATI on, 483 *ab*; F. DAVILA Y LUGO on Span., 485 *b*; JONATHAN DUNCAN on, 650 *a*; Dutch, hist. of, 773 *a*-774 *c*; J. S. MILL on, 472 *b*; dist. fr. Money, 230 *cd*; D. RICARDO on, 472 *b*; Silver, as legal tender, 98 *a*; A. SMITH on, 472 *b*; Tabular syst., W. S. JEVONS on, 472 *b*.—Currency Doctrine or principle, and Bank Act, Sir R. PEEL's, 113 *d*, 407 *d*, 472 *cd*, 623 *c*; Crit. of, 473 *ab*; and Doctrinaire, 623 *cd*.—Inconvertible Currency: S. BRECK on effects of, 178 *a*; Evils of, 63 *b*.—Currency, Paper, Assignat in Revolution, Fr., 63 *ab*, 206 *cd*; Basis of, 93 *d*, 191 *c*; N. BIDDLE's theory of, U.S.A., 139 *d*; G. CANNING on basis and theory of, 210 *d*, 211 *ab*; L. CHITTI's scheme, 279 *bc*; H. CLAY on, 305 *c*; W. COBBETT on, 315 *d*; in Colonies, 328 *b*; and Convertibility, 407 *d*, 860 *c*, 869 *a*; Convertible, Canada, 101 *d*; W. DOUGLASS on, 635 *cd*; Drain of Bullion and, 860 *b*-861 *c*, 868 *c*-869 *b*; B. FRANKLIN on, 804 *d*; Legal tender, 101 *d*, 102 *d*, 112 *d*, 114 *a*, 191 *d*, 211 *a*, 505 *d*; Over-issue, Irel., evils of, 96 *cd*; Theories of, 113 *cd*; U.K., 860 *b*-861 *c*, 868 *c*-869 *b*; U.S.A., hist. of, 102 *d*.—Currency and P. E., J. LAW and syst. of credit, 452 *c*, 732 *a*. Precious metals, scarcity of in Middle Ages, infl., 85 *a*. — Currency, Quantity theory of, 685 *b*; Currency (or Treasury) Notes, 860 *b*-861 *c*.
Curves: compd. with Functions, 474 *ab*; Illustn. of, 473 *cd*.—Curves, illustn. of Consumers' Rent, 575 *bc*, 654 *c*, 861 *cd*; theory of Dimensions, 584 *cd*; Error, Law of, 751 *cd*, 886 *bc*; Price, 445 *b*, 574 *b*, 575 *cd*; Supply and Demand, 540 *cd*, 542 *bcd*, 575 *a*, 576 *a*, 861 *cd*.—Curves, meth. of, in Abstract P. E., 473 *bc*; L. S. CAGNAZZI on, 200 *d*; in Statistical Observation, 474 *c*.
Custom: obstacle to Competition, 377 *c*, 476 *c*; and Curr., 477 *bc*; compd. with Habit, 476 *b*; and Prices, 477 *a*; and Reflexion, 477 *c*; and Wages, 476 *cd*.
Customs Duties: Bonded warehouses, 164 *a*, 475 *d*; on Corn, horses, and sugar, disadv. of abolition, 187 *abc*; Sir M. DECKER on, 519 *b*; Department, 475 *c*; Fr. Douane, 633 *d*; compd. with Due, 645 *cd*; Entrepôts, 616 *ab*, 741 *cd*; Entry, Bill of, 742 *bc*; dist. fr. Excise, 786 *d*; Expertise, 793 *bc*; Hist. of, 474 *d*, 794 *ab*; Incidence of, 476 *a*; and Inland revenue, 475 *c*; Prisage and Recta prisa, 647 *d*, 794 *b*; Protective, 475 *a*; Statistics, 1837-87, 475 *bc*; Sir R. WALPOLE's reform of, 787 *b*.—Customs, Ad valorem duty, A. A. COURNOT on, 15 *d*; under Edward I., 15 *d*; J. S. MILL on, 15 *c*.—Internal Customs and Tolls; J. B. COLBERT's attempt at reform, 319 *c*.

DAIRE, E., on Physiocrats: 477 *d*.
Damnum Emergens and Int., Roman Law basis of Canon Law: 479 *cd*.
DANGEUL, Marquis de Plumart: on Free Trade, 480 *c*; Taxation, 480 *d*.
Darien Co., 481 *abc*.
Darwinism: compd. with Development or Evolution, 481 *d*, 482 *a*, 572 *d*; and Laissez-

Faire, H. Spencer on, 482 *a*; and T. R. Malthus' theory of Population, 481 *d*; and Socialism, 482 *a*; Survival of the Fittest, 482 *b*.

Davanzati, B.: on Curr., 483 *b*; Value, 483 *ab*.

Davenant, C.: on Balance of Trade, 87 *d*, 484 *b*; compulsory Employment, 484 *b*; Merc. Syst., 483 *d*; Price and deficient harvest, 484 *c*; Taxation, 483 *c*, 484 *b*.

Davies, D., and Workmen's Budgets: 484 *d*.

Davila, B., on Poll-tax in Spain: 485 *a*.

Davila y Lugo, F., on Span. Curr.: 485 *b*.

Day, medvl. uses of word: 485 *bcd*.

Dearness, artificial: Bounties, 488 *b*; want of Communication, 489 *ab*; control over Demand, 488 *d*-489 *d*; and Indirect Taxation, 488 *ab*; in Labour market, 489 *d*, 490 *a*; Stk. Ex. 489 *c*; control over sources of Supply, 487 *d*-488 *d*.

Death Duties: Account, 493 *b*; Estate, 493 *bc*; Hist. of, 491 *abcd*; Legacy, 492 *c*; J. S. Mill on, 490 *cd*; J. S. Nicholson on, 490 *d*; Probate, administration, and inventory, 491 *d*; H. Sidgwick on, 490 *cd*; A. Smith on, 490 *bc*; Succession, 492 *d*.

Death-rate: compd. with Birth-rate, 150 *d*, 493 *d*, 494 *a*; rel. to Natural incr., 494 *a*; Normal, 494 *d*; importance in vital Statistics, 493 *d*.——Death-rate, Decline of, and progress of Civilisation, 497 *b*; as element of Well-being, 655 *b*.——Death-rate and Insurance, Life, calcul., Equation of life, 497 *d*; Expectation of Life, 497 *d*, 790 *b*; Population, movement of, 498 *b*.——Death-rate, variations in, diff. of Age, 494 *b*, 495 *b*; Indigence, 496 *d*; Insanitary conditions, 497 *ab*; Marriage, 495 *d*; unhealthy Occupation, 496 *bc*; Race and climate, 495 *d*; Seasons, 495 *cd*; Sex, 495 *c*; Vice, 496 *ab*.

Debasement of Coin: Eng., 499 *b*; Eur. countries, 500 *c*; Expln. of term, 500 *d*; W. Fleetwood on, 731 *d*; Fr., 146 *a*, 500 *b*; Greece and Rome, 498 *d*; Irel., 500 *a*; Meth. of, 498 *c*; Scot., 499 *d*; 16th centy., effects, 722 *b*; A. Smith on, 563 *b*.

Debenture; issued under Companies Acts, 501 *b*; Expln. of, 501 *a*; issue of, and Jnt.-Stk. Co., 501 *b*; Negotiable, 346 *b*; issued under Special Act, 501 *d*.——Debenture Stock, compd. with Debenture, 502 *ab*; compd. with Preference stock, 502 *d*.

Débouchés: James Mill and J. S. Mill on, 503 *b*; J. B. Say's theory, 503 *ab*.

Debt: Common and Civil Law, 505 *c*-506 *c*; Crown, 468 *bc*; writ of Execution, 468 *c*, 789 *cd*; Imprisonment for, 504 *b*; and Int., 504 *b*; and Jnt.-Stk. Co., 506 *b*; Judgment, 504 *a*; Roman Law, 391 *b*; Sc. law, 588 *d*, 592 *b*; Speciality and Contract, 504 *a*.——National Debt, U.K., R. D. Baxter on, 126 *cd*; Conversion of, 854 *c*-855 *c*; G. J. Goschen's operation, 404 *d*, 786 *a*; D. Hume on, 733 *c*; J. R. M'Culloch on, 507 *d*; in Napoleonic period, 42 *b*; 19th centy., 404 *cd*; and Savings Banks, 110 *d*; A. Smith on, 507 *a*; to U.S.A., funding of, 830 *a*, 855 *bc*.——Debts, Public, Professor Adams on political, social, and industrial effects, 508 *b*; and Anticipation of revenue, 507 *b*; Arguments for and against, 507 *cd*; in Colonies, 324 *b*; meth. of Contracting, 508 *cd*; Conversion of, 404 *bc*, 507 *ab*, 508 *d*, 509 *a*, 854 *c*-855 *c*; and Funding syst., 507 *a*; of the World, statistical statement of, 509 *b*-513 *b*.——Redemption of National Debt, J. Bentham on, 132 *a*; Debt services, 1916-24, 828 *c*-830 *b*.

Debtor: position of, 505 *c*, 692 *ab*, 749 *cd*.

Decentralisation: Administrative, Eng., 513 *d*; compd. with Centralisation, 513 *d*; Crit. of, 514 *b*; Judicial, Fr., 513 *d*; Legislative, in federal states, 514 *a*; U.S.A., 513 *d*.

Decimal syst.: Advantage of, 514 *cd*; Commercial use of, 16th centy., 515 *bc*; compd. with Duodecimal, 651 *cd*; Ger. and Russ., 515 *d*; Hist. of Eng., 515 *d*-517 *d*; Latin Union, 515 *d*; Prospects of, Eng., 518 *ab*; invd. by S. Stevin of Bruges, 515 *b*.

Decker, Sir M.; on Customs Duties, 519 *b*; Taxation, anticipation of A. Smith, 519 *c*; Trade, causes of decline in, 519 *cd*; Wealth, sources of national, 519 *d*.

Decl. of London: Blockade, 826 *cd*; Contraband, 862 *b*-864 *a*; Neutrality, 863 *bc*, 864 *a*.

Decl. of Paris: Blockade, effective, 520 *c*, 521 *c*; Contraband, 520 *bc*, 521 *bc*; Neutrality, 520 *bc*, 521 *abc*; Privateering, 520 *cd*, 521 *a*.

Deductive Meth.: and Abstraction, 523 *cd*; Application of, 524 *a*; Austrian Sch., 73 *ab*; W. Bagehot on, applicable only to advanced societies, 79 *d*-80 *b*, 735 *b*; J. E. Cairnes, 202 *ab*, 203 *b*, 525 *c*; Classical Sch., 526 *a*; A. Comte's crit. of, 383 *a*; Direct and indirect, J. S. Mill on, ii., 638 *a*; Dutch Sch., 657 *d*; and Econ. Hist. 675 *bc*; and Econ. man. 122 *d*, 303 *c*, 676 *d*-677 *c*; infl. of Experience in, 791 *ab*; and Historical Sch., 524 *d*, 675 *d*; necessity of combination with Inductive, 526 *ab*; W. S. Jevons on, 524 *d*; T. E. Cliffe Leslie on, 525 *ab*; and Mathematical symbols, 524 *c*; J. S. Mill on, 524 *d*; and Observation, 523 *b*.——Deductive Meth., Postulates and premisses of Social conditions of freedom and restraint, 523 *d*.

Defence, national: mod. Continental syst., 530 *a*; loss of Productive energy by war, 529 *d*, 531 *d*.——Defence, Brit., Cost of, 530 *cd*, 531 *a*; compd. with Fr. and Ger., 531 *b*; Syst. described, 530 *b*.

Deferred payments: Money as stan. of, 532 *d*; Tabular stan., 532 *d*.

Deficit: Causes of, 533 *d*; U.K., statistics of, 534 *ab*.

Definitions: J. E. Cairnes on, 534 *d*; Confusions respecting, 535 *a*; T. R. Malthus on, 534 *c*; Necessity of, 534 *d*; D. Ricardo's neglect of, 534 *bc*; H. Sidgwick, on, 534 *d*; little used by A. Smith, 534 *b*; R. Whately on, 534 *b*.

Defoe, D.: on Money, *Robinson Crusoe*, 535 *c*; Poor relief, 731 *d*; Self-int., 729 *ab*.

De Foville: Curves, 861 *c*.

Delfico, M.: on Free Trade, 538 *a*; Individualism, 538 *a*; absolute Property, 538 *a*.

Delivery, common law of: 538 *d*.
De Luca, G. B.: on **Merc. Syst.**, 539 *c*; **Protn.**, 539 *c*; Taxation, 539 *d*.
Demand: D. Diderot on, 578 *a*; and **Distance in time**, 593 *c*; **Elasticity** of, J. S. Mill on, 691 *c*; Incr. of, ambiguous term, 542 *a*; and **International Value**, 748 *a*; Measure of, J. E. Cairnes' crit. of J. S. Mill on, 540 *b*; Neglect of by older Economists, 540 *a*; Schedules, A. A. Cournot on, 540 *d*; rel. to **Value**, T. De Quincey on, 569 *b*.——**Demand Curves**, 540 *cd*, 542 *bcd*, 654 *c*, 861 *cd*; Cautions in use of, 543 *cd*; and **Elasticity**, 543 *ab*; Individual and Collective, 543 *b*.——**Equalisation of International Demand**, and **Indebtedness**, 748 *b*; J. S. Mill on, 748 *a*.——**Demand**, Law of, and Continuity, 541 *b*; **Price**, 541 *bcd*; **Utility**, Dimin., 541 *a*.——**Demand** and **Supply**, illustr. by **Curves**, 575 *a*, 576 *a*; Interdependence of, 540 *a*; A. Marshall's "fundamental symmetry," 761 *cd*.
Demesne tenants, origin of **Copyhold**: 544 *bc*.
Demography: and **Arith.**, **Political**, 57 *a*; J. Graunt, 57 *a*, 545 *a*, 731 *c*; word invd. by A. Guillard, 544 *d*; **Population**, mathematical knowledge of, 544 *d*; and **Statistics**, 545 *ab*.
Demoivre, A.: on **Annuity** on Life, 545 *cd*; **Expectation of Life**, term introd. by, 790 *b*; **Probability**, 545 *c*.
Demonetisation: Effects of, 546 *bc*; **Statistics** of, 546 *ab*.
Denominator, Common: W. S. Jevons' measure of **Value**, 549 *a*; F. A. Walker on, 549 *b*.
Department: Administrative, list of them, 550 *cd*; Fr. territorial, 551 *a*.
Depopulation: and **Agriculture**, decline of in 14th cent., 552 *a*; and Colonisation, 277 *c*, 559 *b*; and **Enclosures**, 551 *b*, 552 *bc*, 710 *c*; as symptom of **Famine**, 553 *cd*; and Labourers, Statute of, 552 *b*; Remedies for, 558 *d*; econ. Results of, 558 *d*; Returns of 1517 and 1608, 552 *c*; 16th cent., 552 *bc*.——**Depopulation**, Causes of: **Communication**, improvements in towns, **marriage** rate, 555 *ab*.——Economic: repeal of **Corn Laws**, machinery, **factory syst.**, growth of towns, **education**, stan. of living, 554 *cd*; repeal of **Poor Law**, formation of deer forests, 554 *b*.——Physical, 553 *abc*.——Political: Deportation, persecution, bad gov., 554 *a*; War, 553 *d*.——**Depopulation**, rural, **statistics** of, Eng. and Wales, 555 *d*-556 *c*; Eur. countries, 558 *b*; Fr., 557 *d*-558 *b*; Irel., 557 *abcd*; Scot., 556 *c*; U.S.A., 558 *bc*.
Deposit: **Statistics** of, 560 *c*; Use of term, 560 *ab*.
Depreciation: of **Coinage**, and **Exchequer**, medvl., 780 *c*; of Silver, 81 *c*, 147 *b*, 149 *a*, 564 *b*, 771 *d*.——Deprec. of Machinery, 561 *ab*; and **Reserve**, 561 *d*; and **Sinking Fund**, 561 *d*.——Deprec. of **Monetary Standard**, "secular," E. Copleston on, 420 *cd*, 421 *a*; and **Gov.** action, 563 *b*; J. S. Mill on, 562 *a*, 563 *a*; and Paper **money**, effects of, 563 *b*; D. Ricardo on, 562 *b*; and **Value**, measure of, 562 *c*.
Depression: **Agricultural**, Causes, 563 *d*-564 *d*; Effects, 565 *ab*.——**Depression of Trade**, Causes, 567 *abcd*; Features of, 1874-5, 566 *bcd*; Limitations to, 565 *d*; Remedies for, 568 *a*.
De Quincey, T.: on law of **Dimin. returns**, 569 *cd*; confused **Final utility** with total, 569 *b*, 570 *a*; on **Profit**, 569 *c*; on **Rent**, 569 *d*.——De Quincey, T., on **Value**, rel. to **Demand**, 569 *b*; and **Diffic. of attainment**, 569 *a*, 580 *a*; D. Ricardo's theory of, 568 *b*; rel. to **Utility**, 568 *d*.
De Sanctis, M. A., on scarcity of **Money**: 570 *c*.
Destutt de Tracy, A. L. C.: infl. on **American Sch.**, 805 *c*, 806 *c*; on **Value**, D. Ricardo on, 572 *bc*.
Development: and **relativity**, W. Bagehot on, 80 *d*; or **evolution**, compd. with **Darwinism**, 481 *d*, 482 *a*, 572 *d*; J. G. Fichte on, 573 *a*; G. W. F. Hegel and idea of in **Econ.**, 573 *a*; leading principle in **Historical Meth.**, 573 *a*, 675 *d*.
Dew, T. R.: on **Banking**, 573 *d*; **Int. and usury**, 573 *d*; **Population**, 807 *b*.
Diderot, D.: on **Agriculture**, 577 *d*; **Charity**, 578 *b*; **Demand**, 578 *a*; **Exchange**, 578 *a*; Free Enterprise, 579 *a*; **Gov.**, 579 *ab*; **Labour**, 578 *c*; Legisl., 578 *c*; **Luxury**, 578 *cd*; **Physiocrats**, 577 *cd*, 745 *a*; **Poverty**, 578 *d*; **Property**, 578 *d*, 579 *a*; **Taxation**, 579 *b*; **Wealth**, national, 578 *b*.
Dieterici, K. F. W., on **Meth.** of P. E.: 579 *c*.
Diffic. of Attainment: **Austrian Sch.** on, 582 *a*; in absence of **Competition**, 581 *c*; and **Cost of prodn.**, F. A. Walker on, 580 *a*; and **Dimin. returns**, 581 *b*; Exceptions to theory, 580 *d*; where Incr. is limited, 581 *cd*; and **Mechanics of Industry**, W. S. Jevons on, 581 *b*, 582 *a*; J. S. Mill on, 580 *ab*; in cases of **Monopoly**, 581 *d*; D. Ricardo on, 580 *c*, 582 *a*; and **Value**, T. De Quincey on, 569 *a*, 580 *a*.
Dime Royale: De Lajonchère's project, 537 *b*; S. le P. Vauban's project, 537 *b*, 583 *abc*.
Dimensions, theory of: 583 *d*; illustr. by **Curves**, 584 *cd*; and **Diagrams**, 584 *c*; appl. to unit of **Utility**, 584 *b*.
Dimin. Returns, law of: 173 *a*, 585 *a*; J. E. Cairnes on, 586 *a*; H. C. Carey on, 585 *d*; T. Chalmers on, 585 *d*; T. De Quincey on, 569 *cd*; and **Diffic. of attainment**, or **Cost of Prodn.**, 581 *b*; T. R. Malthus on, 585 *b*; J. S. Mill on, 585 *d*; Mod. theory, 586 *a*; and **Rent**, 585 *b*; D. Ricardo on, 585 *c*; Sir E. West on, 585 *c*.
Discommodity: term invd. by W. S. Jevons, 589 *c*.
Discount: on **Bill of Exchange**, 589 *d*; **Stk. Ex.**, Eng., 590 *d*, 591 *a*; **Stk. Ex.**, Fr., 590 *c*; True, theory of, 590 *ab*; Uses of word, 589 *d*.——**Discount**, Rate of, **Autumnal drain**, 74 *a*; Eng., 93 *abc*; Fr., 93 *abc*, 97 *d*; Ger., 93 *abc*; Hamburg, 106 *b*; Scot., 96 *a*; **Drain of Bullion**, Bank of Eng., 868 *d*.
Discoveries, geographical, infl. on **Trade**: 591 *bc*.
Distance in time: S. Bailey on, 593 *d*; and **Capital**, 593 *b*; and **Demand**, 593 *c*; W. S.

JEVONS on, 592 *d*; and **Labour**, 593 *c*; J. LOCKE on, 592 *c*; J. S. MILL on, 593 *b*; J. RAE on, 592 *c*; and **Saving**, 593 *ab*; and **Value**, 592 *cd*.

Distraint: **Agric. Holdings Act**, 1923, 801 *c*.

Distress: Causes of, 594 *a*; Legal term, hist. of, 594 *d*-595 *b*; princ. of **Relief**, 594 *b*.

Distribution: and Bargaining operations, 600 *cd*; and **Communism**, 598 *a*, 606 *b*; and **Consumption**, 394 *d*; diffic. of Def., 603 *ab*; functions of **Entrepreneur**, 600 *b*, 601 *b*, 809 *b*; and **Exchange**, 596 *b*; and rel. of **Labour and Capital**, 600 *d*; J. S. MILL on, 603 *a*; Nature of process, 599 *d*; Non-technical use of word, 596 *c*; **Physiocrats** on, 595 *bc*; and **Rent of Land**, 602 *a*; D. RICARDO on, 596 *a*, 603 *a*; J. B. SAY on, 595 *d*; Sci. of, 597 *a*; comparative neglect of by A. SMITH, 595 *cd*, 603 *a*; and **Socialism**, 598 *a*-599 *a*, 606 *b*; and Sub-products, 600 *a*; law of, and **Wages**, 599 *c*-602 *c*; F. A. WALKER'S theory of, 809 *b*.

Dividend: in **Bankruptcy**, 607 *d*; in rel. to **Capital**, 222 *b*, 606 *d*; and **Deferred Stock**, 533 *a*, 607 *b*; and **Directors**, liab. of, 607 *c*; Medvl. term, 607 *c*; and **Preference Shares**, 607 *a*; in rel. to **Profit**, 606 *d*.

Dock: and **Bonded Warehouses**, 612 *b*, 615 *d*; and **Commercial routes**, 616 *ab*; and **Competition**, 616 *c*; Econ. changes, 615 *d*; **Finances** of, 617 *ab*; and **Free Trade**, 616 *a*; early Hist. of, 611 *cd*; Incidence of charges, 616 *d*; effects on London **trade**, 612 *a*; Management of, 617 *c*; and **Navigation Laws**, 616 *b*; Public ownership, arguments for and against, 617 *cd*; controlled by **Railway** groups, 621 *a*, 867 *c*; and Suez Canal, 616 *b*; **Dock Warrant**, 615 *c*, 623 *a*.——**Dock Labour**, C. BOOTH on list of branches of, 621 *d*; and **Irregularity of Employment**, 622 *d*.——**Dock** Statistics, Bristol, 614 *c*, 867 *b*; Cardiff, 614 *d*, 867 *b*; Dublin, 615 *a*; Glasgow, 615 *ab*, 866 *d*, 867 *b*; Hull, 614 *d*, 866 *d*, 867 *b*; Leith, 615 *c*; Liverpool, 613 *d*, 866 *d*, 867 *b*; London, 613 *ac*, 866 *d*, 867 *b*; Manchester, 866 *d*, 867 *b*; Middlesborough, 867 *b*; Newcastle, 614 *b*, 867 *b*; Newport, 867 *b*; Plymouth, 867 *b*; Southampton, 866 *d*, 867 *b*; Sunderland, 614 *c*; Swansea, 614 *c*, 867 *b*; U.K., 618 *a*-621 *b*, 866 *d*, 867 *b*.

Doctrinaire: E. BURKE on, 624 *a*; and **Currency doctrine**, 623 *cd*; and **Laissez-faire**, 623 *c*; J. S. MILL on, 624 *b*; and D. RICARDO'S **definitions**, 623 *d*; W. WHEWELL on, 624 *b*.

Dogma and econ. enquiry: 624 *d*.

Domesday Book: Sources fr. wh. compiled, 629 *ab*; and **Statistics**, 629 *d*; and **Taxation**, 630 *a*; Technicality of, 630 *a*.

Domicil: and **Conflict of Laws**, 387 *c*, 631 *d*; of **Corporations**, 632 *a*; Infl. of, 631 *b*; and **Inheritance**, 631 *d*; and Legitimacy, 631 *bcd*; and **Marriage**, 631 *cd*; in time of War, 631 *d*-632 *a*.

DOUBLEDAY, T., on law of **Population**: 634 *b*.

DOUGLASS, W.: 635 *bcd*; J. R. M'CULLOCH and A. SMITH indebted to, 804 *cd*.

DOVE, P. E.: on **Land**, nationalisation of, 636 *a*; Legisl., 636 *a*; **P.E.**, 636 *b*; **Taxation**, 636 *ab*.

Dower: 422 *b*; Legal sense, 636 *d*; Popular sense, 636 *c*.

DRAGONETTI, L., on Neapolitan **finances**: 637 *b*.

Drapier's Letters, J. SWIFT'S, and W. WOOD'S patent: 639 *d*, 732 *a*.

Drawbacks: and **Bonded warehouses**, 163 *d*; compd. with **Bounties**, 640 *b*; and **Merc. Syst.**, 353 *ab*; A. SMITH on, 353 *a*, 640 *bc*.

DRUMMOND, H.: on **Corn Laws**, 642 *a*; sources of national **Wealth**, 642 *b*.

Drunkards: protn. of **Property**, 588 *bc*, 643 *a*; statistics of Retreats, 642 *d*-643 *a*.

DUCPETIAUX, E.: on Criminals, punishment of, 645 *a*; **Laissez-faire**, 645 *b*; **Pauperism**, 645 *b*.

Due: compd. with **Custom**, 645 *cd*; Ecclesiastical, 645 *d*-646 *c*; Fiscal or regal, 647 *bcd*; Municipal, 646 *d*, 647 *a*; Seignorial or Manorial, 647 *a*.

Dunbar, C. F.: 808 *c*, 869 *d*-870 *c*; on **American Sch. of P. E.**, 809 *a*.

DUNCAN, H.: on **Emancipation** of Slaves, 649 *d*; founder of **Savings-Banks**, 649 *bcd*.

DUNOYER, C., on **Immaterial Wealth**: 651 *b*.

DUPIN, Claude: on Corn Trade in Fr., 652 *b*; **Money**, 652 *c*.

DUPONT, P. S.: articles in **Éphémérides**, 653 *ac*, 744 *c*; on **Free Trade**, 652 *d*; **Impôt unique**, 653 *c*; Infl. on **American Sch.**, 805 *bc*; **Laissez-faire**, 653 *c*; and **Physiocrats**, 652 *d*.

DUPUIT, A. J. E.: on **Communication, means of**, 654 *d*; **Mathematical Meth.**, 654 *cd*; **Utility** and **Value**, 654 *ab*, 765 *c*.

Dutch E. Ind. Co.: 330 *a*, 350 *b*, 488 *a*, 670 *b*.

Dutch Sch. of Economists: **Abstract** meth., 657 *c*; **Bimetallism**, 657 *d*, 658 *d*; P. de la COURT on **Monopoly**, 657 *a*; **Deductive Meth.**, 657 *d*; **Finances**, 659 *a*; **Free Trade**, 658 *d*; D. GRASWINCKEL on **free trade**, 656 *bc*; H. GROTIUS on **Value**, 656 *ab*; W. KERSSEBOOM on Life tables, 657 *b*; and T. R. MALTHUS' doctrine of **population**, 658 *b*; W. C. MEES, follower of D. RICARDO, 657 *c*; C. SALMASIUS on **Int.**, 656 *d*; and **Socialism**, 658 *cd*; and **State interference**, 658 *bc*.

Duty: **Ad valorem**, 15 *cd*, 828 *b*.——**Countervailing Duty**, Objects of, 443 *b*; D. RICARDO and prices due to taxation, 443 *d*.——**Discriminating or Differential Duties**, J. R. M'CULLOCH on, 591 *d*; J. S. MILL on, 592 *a*; Reasons for, 591 *d*.——Entertainments Tax, 828 *cd*, 830 *c*; Excess Profits **Duty**, 828 *c*, 829 *bd*; M'Kenna Duties, 828 *b*.

Dwellings, Industrial: princ. of Construction, 663 *b*; Financial aspect, 661 *ab*; Hist. 661 *d*-662 *d*; Objects, 269 *bc*, 660 *d*; **Statistics**, 661 *c*.——**Dwellings, Model**: in Fr., **Cité ouvrière**, statistics of, 664 *d*-665 *c*; Hist. 664 *b*.——**Dwellings, Reguln. by the State in Eng.**, 665 *d*; acts enforcing Sanitation, 666 *abcd*.

Eady, Lord Justice, on **Capital, Fixed and circulating**: 222 *b*.

Earnings: and **Int. fund**, 667 *b*.——**Earnings of Management** and **Profit**, 667 *cd*; a species of **Wages**, 667 *d*, 668 *b*.

E. Afr. Co.: 19 *d*, 20 *bc*, 332 *b*.
Easterlings or **Hansards**: 17 *b*, 668 *d*-669 *b*.
E. Ind. Companies, Foreign: 319 *c*, 330 *b*, 670 *b*.
E. Ind. Co.: 169 *c*, 271 *b*, 326 *d*, 330 *a*, 343 *d*, 344 *bd*, 350 *b*, 353 *c*, 375 *c*, 483 *d*, 487 *d*, 650 *b*, 722 *d*, 723 *abc*, 728 *a*, 729 *bc*, 730 *c*; Sir J. CHILD on, 277 *a*; home **Competition**, 671 *abc*; mode of Conduct, 670 *a*; Sir D. DIGGES on, 582 *bc*, 726 *bc*; H. DUNDAS on, 650 *bc*; and Econ. settlement of Ind., 331 *ab*, 672 *c*; H. ELKING on, 693 *a*; objects of, 669 *cd*; State control estab., 672 *bc*; necessity of Territory, 670 *d*.
E. Ind. Dock Co.: 612 *c*.
Eastland Co.: 18 *a*, 271 *b*, 375 *c*, 672 *d*, 673 *a*.
ECK, J., on **Int. and Usury**, Triple Contract: 673 *cd*.
Economic: **Econ. Freedom**, 674 *bc*; Econ. Phrases, T. CHALMERS', 256 *b*.——**Econ. Man**, conception of by **Deductive** economists, 122 *d*, 303 *c*, 676 *d*-677 *c*; and **Egoism**, 687 *b*.——Econ. Organisation, and **Civilisation, Gilds**, 302 *d*; Nation, 302 *d*; **Village communities**, 302 *d*.
Economics: **Applied**, or **Art of P.E.**, 44 *a*, 58 *d*.——**Econ.**, ARISTOTLE'S conception, 53 *d*, 279 *d*, 280, 813 *b*-814 *a*.——**Econ.**, Medvl., 85 *a*; M. AGAZZINI on, 21 *a*; Infl. of St. Thomas AQUINAS, 48 *a*.——**Econ.**, Sci. of, 59 *a*; Experiment in, 791 *d*.——**Econ. sci.**, Meth. of, 679 *a*; **Analytical**, 38 *cd*; **A posteriori**, 43 *b*; C. BABBAGE on, 75 *d*, 76 *a*]; R. CANTILLON, 215 *c*; H. C. CAREY, 226 *b*; K. F. W. DIETERICI on, 579 *c*; **Experimental**, use of, 792 *ab*.——**Econ. sci.**, **Abstract** meth., T. CARLYLE on, 228 *a*; compd. with Concrete, 5 *c*; **Dutch Sch.**, 657 *c*; J. S. MILL on, 5 *b*, 734 *d*.——**Econ. sci.**, **A priori** meth., 47 *d*; J. S. MILL, 383 *b*; D. RICARDO, 47 *d*.——**Econ. sci.**, **Deductive Meth.**, and Abstraction, 523 *cd*; Application of, 524 *a*; **Austrian Sch.**, 73 *ab*, 817 *bc*; appl. to advanced societies, W. BAGEHOT on, 79 *d*-80 *b*, 735 *b*; J. E. CAIRNES, 202 *ab*, 203 *b*, 525 *c*; **Classical Sch.**, 526 *a*, 814 *d*, 815 *a*; A. COMTE'S crit. of, 383 *a*; **Dutch Sch.**, 657 *d*; and **Econ. Hist.**, 675 *bc*; and **Econ. Man**, 122 *d*, 303 *c*, 676 *d*-677 *c*; infl. of **Experience** in, 791 *ab*; and **Historical Sch.**, 524 *d*, 675 *d*; necessity of combination with **Inductive**, 526 *ab*; W. S. JEVONS on, 524 *d*; T. E. Cliffe LESLIE on, 525 *ab*; and **Mathematical** symbols, 524 *c*, 861 *cd*; J. S. MILL on, 524 *d*; and **Observation**, 523 *b*; Premises of, 523 *d*.——**Econ. sci.** and **Ethics**, H. C. ADAMS on, 799 *a*, 800 *a*; W. CUNNINGHAM on, 859 *d*.——**Econ. sci.**, **Historical Meth.**, 675 *d*; T. von BERNHARDI, 135 *d*; A. COMTE and **Sociology**, 382 *d*, 383 *cd*; W. CUNNINGHAM, and **Ethics**, 859 *cd*; **Development** a leading principle of, 573 *a*, 675 *d*; J. S. MILL on, 735 *a*; rel. to Organic view of society, 675 *d*.——**Econ. sci.**, **Inductive Meth.**, meth. of Agreement and Diff., 792 *a*; **Classical Sch.** and, 526 *a*; Sir F. M. EDEN on, 679 *c*; A. SMITH'S use of, 734 *a*.——**Econ. sci.**, Jurisprudence and, H. C. ADAMS on, 800 *b*.——**Econ. sci.**, Logical meth., J. E. CAIRNES, 202 *a*, 525 *c*.——**Econ. sci.**, **Mathematical Meth.**, G. CEVA on, 252 *cd*; A. A. COURNOT, 445 *b*; **Diagrams**, 574 *a*-576 *b*; A. J. E. DUPUIT, 654 *cd*; M. E. L. WALRAS, 543 *d*.——**Econ. sci.**, **Synthetic Meth.** compd. with **Analytical**, 38 *cd*.——**Economics, Teaching of**: **Birmingham**, 875 *d*.——Bristol, 876 *ab*.——**Cambridge Economics Tripos**, 877 *b*-879 *d*; aims of, 877 *bcd*, 878 *a*; Economics, rel. of, to business, 877 *cd*; International studies, 878 *ab*; schedule of examination, 878 *bcd*; subjects included, 878 *cd*, 879 *ab*.——Durham, 876 *a*.——Exeter, 876 *b*.——Ireland, 876 *d*.——Leeds, 875 *d*, 876 *a*.——Liverpool, 876 *a*, 877 *b*.——London: Birkbeck Institute, 875 *c*; King's College, 875 *c*; School of Economics, 875 *c*, 877 *a*; University of, 875 *d*, 876 *a*; University College, 875 *c*, 877 *b*.——Manchester, 881 *d*, 883 *b*.——Newcastle, 876 *b*.——Nottingham, 876 *b*.——**Oxford**, 879 *d*-881 *d*; subjects for examination, 880 *c*, 881 *c*; Honour School, 880 *ab*, 881 *bcd*; diploma, 880 *ac*, 881 *d*; seminar, 881 *c*; Ruskin College, 881 *b*.——Reading, 876 *b*.——Scotland, 876 *bc*.——Sheffield, 876 *a*.——Southampton, 876 *b*.——Wales, 876 *d*.——France, 877 *a*.——Germany, Universities, 877 *a*; secondary schools, 877 *a*.——Italy, S. COGNETTI on, 840 *bc*.——U.S.A., 877 *a*, 881 *d*, 881 *d*-883 *b*; business schools and research bureaux, 882 *bc*; character of instruction given, 882 *abc*; method of instruction, seminar, 883 *a*; subjects included, 882 *d*; Universities and Economic Associations, 883 *ab*; secondary schools, 883 *b*.
Economistes or **Physiocrats**: 679 *ab*.
Economy: general use of word, 678 *a*.
EDEN, Sir F. M.: on Brit. **Commerce**, 680 *a*; **Inductive Meth.**, 679 *c*; **Poor Law**, 277 *c*, 679 *cd*.
EDGEWORTH, Maria, on Irish land syst.: 680 *cd*.
Education: J. BENTHAM on, 133 *c*; R. COBDEN on, 316 *b*; General, econ. aspects of, 681 *bc*, 684 *a*; A. SMITH on, 264 *a*, 713 *c*; Technical, desirability of, 681 *c*.——**Education**, National, 269 *d*; Sir E. BAINES on, 83 *d*.——**Education** Act, 1921, regulating **Children's Employment**, 836 *abc*; **Education**, Ministry of, 12 *a*, 13 *b*.
Egoism: and **Economic man**, 687 *b*; used by Economists in philosophic sense, 686 *a*; T. R. MALTHUS on, 686 *cd*; A. SMITH on, 686 *b*.
Eight hours' day: ordinary Arguments for, 688 *b*; in **Colonies**, 688 *a*; Effects, 688 *cd*; arguments for Legislative enactment, 689 *c*; Origin of movement, 687 *d*; advocated in exceptional Trades, 688 *a*.
Elasticity: of **Demand**, 543 *ab*, 691 *c*; A. Marshall's use of, 543 *b*, 691 *b*; J. S. MILL on, 691 *c*.
ELIOT, F. P., on **Ideal money**: 692 *cd*.
ELKING, H.: on **E. Ind. Co.**, 693 *a*; Whale fishery, 693 *a*.
Ely, R. T.: 809 *d*.
Emblements, or **Growing crops**: 696 *bc*.
Emigration: Causes of, 697 *a*; Earlier and later phases, 696 *d*; Eng., early, 322 *b*, 333 *c*, 698 *d*; Ger., 697 *b*, 701 *ac*; Holl., 698 *c*; and **Immigration**, 700 *b*; Italy, 701 *c*; Japan, 701 *cd*; J. S. MILL on, 697 *d*; 19th centy.,

322 *b*, 699 *b*; Norway and Sweden, 701 *c*; Portugal, 698 *b*; Scot. and Ireland, 701 *b*; Spain, 698 *b*; and colonisation, E. G. WAKEFIELD on, 333 *d*, 334 *a*, 697 *ab*, 701 *a*.—**Emigration**, from U.K., new policy, 697 *c*, 699 *c*, 701 *c*; direction of, 700 *d*; occupations and type of emigrants, 699 *d*-700 *a*.—**Emigration**, Results of: Commercial, 697 *d*, 700 *d*; Economics, 697 *c*; Political, 698 *a*, 701 *b*; on volume of **Population**, 697 *c*, 700 *b*; on condition of Working classes, 697 *c*, 699 *cd*.

Eminent Domain: Eng., 381 *b*, 702 *d*; Fr., 702 *d*; H. GROTIUS on, 702 *ab*; U.S.A., 381 *b*, 702 *c*, 703 *a*.

Empiricism, econ.: Sir T. GRESHAM, 704 *a*; Middle Ages, 721 *b*; Mod. revival of, 704 *b*.

Emphyteusis, tenure of **land** in **Roman law**: 703 *c*.

Employers: W. BAGEHOT on, 705 *b*; compd. with Capitalists, 704 *d*; effects of **Co-operation** on, 706 *b*; **Employers and Employed**, agreements between, 884 *c*-886 *b*; or **Entrepreneur**, 741 *d*; False and real classes of, 707 *c*; Federations and Organisations of, 884 *c*, 885 *abc*, 886 *a*; Functions of, 704 *d*, 705 *bc*; Importance of, in mod. **industry**, 706 *a*; legal rel. to Labourer, 706 *d*; Liab. of, 358 *c*, 707 *a*; Socialist view, 706 *bc*; and **Trade Unions**, mutual recognition of rights, 884 *c*, 885 *abc*, 886 *a*; F. A. WALKER on, 705 *bd*, 742 *a*, 809 *b*.

Employment: and Unemployed, 707 *d*.—**Dock Labour**, 622 *d*.

Emulation: effects, on **Expenditure**, 709 *bc*; on **Wealth**, 708 *d*.

Enclosures: **Arable land, conversion to pasture**, 260 *d*, 407 *ab*, 710 *b*; J. ARBUTHNOT on, 18th centy., 52 *b*; **Champion and Severalty**, 23 *b*, 260 *d*; and **Depopulation**, 551 *b*, 552 *bc*, 710 *c*; Effects, 52 *b*, 711 *c*; under Feudal syst., 359 *d*, 710 *a*; Mod. legisl., 24 *b*, 711 *d*; Progress, 18th centy., 29 *bc*, 32 *d*, 157 *b*, 711 *a*; under Tudors, 28 *d*, 710 *c*.

Encyclical of Pope Leo XIII.: on **Poor Relief**, 712 *d*; on **Socialism**, 284 *cd*, 712 *c*.

Endowments: princ. of Application, 714 *d*; Arguments for and against, 264 *ab*, 713 *d*, 714 *c*; A. SMITH on, 264 *a*, 713 *c*.

Enfranchisement: of **Serf**, effects of, 717 *a*.—**Enfranchisement** of **Copyhold** lands, Compulsory, 718 *b*; Voluntary, 422 *b*, 717 *d*.

English Early Econ. Hist.: 719 *c*; Bank of Eng., foundation of, 728 *c*; Commercial policy of Edward I. and Edward III., 721 *c*; **Econ. sci.**, reasons for slow growth in 16th and 17th centy., 729 *bc*; **Individualism**, econ. D. HUME, 728 *b*.—**Balance of Trade**, Sir R. MADDISON on, 723 *d*; E. MISSELDEN on, 723 *c*.—**Companies**, E. Ind., 722 *d*, 723 *abc*, 726 *bc*, 728 *a*, 729 *bc*; **Merchant Adventurers**, 722 *cd*, 725 *d*, 727 *a*; Trading, hist. of, 728 *a*; **Turkey** or Levant, 726 *b*, 728 *a*, 729 *b*.—Medvl. Church, Eng. compd. with Continent, 721 *abcd*; infl. on **Gilds**, 720 *c*; on **Int. and usury**, 719 *d*, 720 *bcd*; on **Justum pretium**, 720 *c*.—Medvl. **Econ.**, **Credit**, 721 *c*; **Empiricism**, 721 *b*; **Int. and Usury**, 721 *c*; **Money**, 721 *d*; **Staple** syst., 721 *c*.—**Merc. Syst.**, **Balance of Trade**, 724 *c*; undermined by development of **Banking**, 729 *a*; N. BARBON, 728 *d*; opposed to Canonists on **Usury**, 725 *b*; Sir J. CHILD, 725 *c*; R. COKE on **Manufacture**, 727 *bc*; and **Companies**, 725 *cd*; Sir T. CULPEPER (2) on **Usury**, 725 *b*; Sir D. DIGGES, 726 *bc*; J. HALES, 722 *b*; T. HOBBES, 728 *b*; and Interdependence of econ. and other forces, 724 *b*; J. LOCKE, 728 *b*, 729 *a*; Sir R. MADDISON, 723 *d*; E. MISSELDEN, 723 *bc*; T. MUN, 723 *acd*, 724 *ac*, 725 *c*, 726 *c*, 727 *ad*, 729 *c*; **Navigation Laws**, 726 *d*; **Self-Int.**, 724 *a*; Sir W. TEMPLE, 724 *b*; J. WHEELER, 722 *d*.—**Merchant Adventurers**, struggle with **Staple** syst., 725 *d*; opposed on grounds of **Usury**, 722 *c*.—Sixteenth centy., **Agriculture**, 722 *a*; **Commerce**, 722 *b*; **Debasement of Coin**, effects of, 722 *b*; **Industry**, 722 *a*.—**Staple syst.**, defence of, by G. de MALYNES, 723 *bc*; by T. MILLES, 722 *c*.

English Sch. of P.E.: 730 *a*; infl. on **American Sch.**, 805 *b*, 806 *bc*, 807 *ac*, 809 *bc*, 810 *b*, 811 *a*; J. ANDERSON on Rent, 39 *d*, 734 *b*; **Anti-Corn-Law League**, 736 *b*; similarity to **Austrian Sch.**, 735 *c*; W. BAGEHOT, **Deductive Meth.**, 735 *b*; Bank Act, Sir R. PEEL'S, crit. of, 735 *c*; **Bimetallism**, mod. view, 735 *c*; J. BRIGHT and R. COBDEN, 735 *b*; I. BUTT, 832 *d*-833 *c*; J. E. CAIRNES, 735 *b*; T. CHALMERS on **Rent**, 734 *c*; W. CUNNINGHAM, 859 *a*-860 *a*; **Econ. Sci.**, recent developments in, 736 *c*; H. FAWCETT, 735 *b*; A. FERGUSON, 733 *b*; infl. on **Fr. Sch.**, 733 *a*; D. HUME on **Balance of Trade**, 732 *c*, 733 *c*; F. HUTCHESON, "greatest happiness of greatest number," 733 *b*; W. S. JEVONS, crit. of J. S. MILL, 735 *a*; T. E. Cliffe LESLIE, **Historical** economist, 735 *a*; J. R. M'CULLOCH, 734 *c*; T. R. MALTHUS on **Population**, 734 *a*; J. F. D. MAURICE and **Christian Socialism**, 735 *a*; J. S. MILL, application of **Abstract** meth. in concrete, 734 *d*; Minor writers, 735 *d*, 736 *a*; R. OWEN, 734 *c*; D. RICARDO on **Rent**, 734 *bc*; J. E. T. ROGERS, **Historical** economist, 735 *a*; W. N. SENIOR, 734 *c*; A. SMITH, crit. of **Commercial syst.**, 733 *d*; Sir J. STEUART, 733 *d*; **Wages Fund**, crit. by W. S. JEVONS and F. A. WALKER, 735 *c*, 809 *b*.—**Laissez-faire**, 18th centy. movement towards, 732 *b*; **School**, 735 *b*.—**Merc. Sch.**, N. BARBON, 731 *d*; Sir J. CHILD, 731 *a*; Sir T. CULPEPER (2), 730 *d*; J. HALES, 730 *b*; J. LOCKE, 731 *c*; E. MISSELDEN, 730 *d*; T. MUN and exportation of **Bullion**, 723 *acd*, 730 *c*.—Early Theorists: J. ASGILL, 731 *a*: G. BERKELEY, 732 *a*; R. CANTILLON and theory of **Value**, 732 *c*; D. DEFOE, 731 *d*; S. FORTREY on Eng. **trade**, 731 *a*; J. GRAUNT and **Demography**, 731 *c*; T. HOBBES, 731 *a*; J. LAW on **Credit** and **Money**, 732 *a*; J. MASSIE, 732 *d*; Sir W. PETTY and **Arith.**, **Political**, 731 *b*; J. TUCKER, 732 *d*; W. WOOD, 732 *a*.

Entail: Eng. syst., 738 *b*-740 *c*; Sc. syst., 740 *d*-741 *b*.—**Entail**, Objections to, as

checking Improvement, 739 *c*; as restricting Transfer, 740 *a*.
Enterprise: Free, D. Diderot on, 579 *a*.
Entertainments Tax: 828 *cd*, 830 *c*.
Entrepôts: and reopening of Commercial routes, 616 *ab*; and Customs Duties, 741 *cd*.
Entrepreneur: or Employer, 741 *d*.——Functions of, in Distribution, 600 *b*, 601 *b*, 810 *b*; F. A. Walker on, 705 *bd*, 707 *c*, 742 *a*, 809 *b*.
Éphémérides: D. Diderot on, 745 *a*; Hist. of, 743 *d*-747 *a*; Importance in econ. hist., 747 *bc*; crit. of opponents of Physiocrats, 744 *d*; and Slavery, abolition of, 125 *b*, 744 *a*.——Éphémérides, Articles by N. Baudeau, 125 *bc*, 744 *abc*, 745 *c*; Butré, 744 *c*; P. S. Dupont, 653 *ac*, 744 *c*; V. R. de Mirabeau, 744 *b*, 745 *c*; F. Quesnay, 744 *b*; A. R. J. Turgot, 744 *c*.
Equality, econ. conception of, free Competition: 748 *d*.
Equilibrium: and W. S. Jevons' Mechanics of Industry, 581 *b*, 749 *b*.——Equilibrium of Supply and Demand, 749 *b*, 761 *c*; and Price, 749 *c*.
Equity: administration of Accounts, 750 *c*; Contract, 750 *d*; Trust, 750 *c*.
Error, Law of: 886 *bc*; Application, 753 *a*, 886 *b*; illustr. by Curves, 751 *cd*; classes of Phenomena in wh. observed, 752 *ab*; and Statistics, 751 *b*, 886 *bc*; illustr. by Tables, 752 *cd*.
Esterno, P.: defence of Agriculture, 755 *c*; on Banks, departmental, 755 *b*; follower of T. R. Malthus, 755 *c*.
Ethics: Prot., and Historical Sch., 286 *bcd*.——Ethics, conn. with Art. of P.E., in Distr., 596 *cd*.——Ethics, conn. with Sci., econ., 597 *a*; H. C. Adams on, 799 *a*, 800 *a*; W. Cunningham on, 859 *d*.
Evolution: compd. with Darwinism, 481 *d*, 482 *a*, 572 *d*; J. G. Fichte and G. W. F. Hegel on, 573 *a*; Social, econ. rel. of to scientific meth., 573 *a*, 675 *d*.——Evolution, Econ., and F. List, 310 *d*, 613 *cd*; Theory of, 573 *a*.
Examples, use of; Fictitious, F. Bastiat, T. De Quincey, D. Ricardo, 758 *bc*; Real and General, D. Ricardo and A. Smith, 758 *b*; Real and Particular, J. E. Cairnes and A. Smith, 758 *b*.
Excess Profits Duty: 828 *c*, 829 *bd*.
Exchange: rates of, and Arbitrage, 51 *a*; Austrian Sch. on, 816 *b*; dist. fr. Barter, 122 *c*; Broking, compd. with Bill Broking, 140 *d*, 141 *a*, 778 *b*; and transmission of Bullion, 777 *c*; D. Diderot on, 578 *a*; and Distr., 596 *b*; Dry, euphemism for usury, 643 *b*; H. H. Gossen on, 766 *a*; W. S. Jevons on, 766 *bc*; C. Menger on, 766 *c*, 816 *b*; James Mill on, 759 *b*; J. S. Mill on, 759 *cd*, 760 *c*-761 *b*; Exchange of Notes, and Sc. clearing syst., 307 *d*, 778 *ab*; Origin of, 121 *d*; basis of Prodn. and Distr., 758 *d*; as part of Prodn., 451 *d*; Sci. of, or Catallactics, 233 *c*, 351 *bc*, 735 *b*; A Smith on, 759 *b*; Uses of word, 261 *c*; M. E. L. Walras on, 766 *c*; F. Wieser on, 816 *c*.——Exchange or Bourse, 174 *d*, 767 *b*; Coulisse, 441 *c*.——Exchange, Foreign, Arbitrage demand, 50 *bcd*; Axioms governing, 772 *b*.——Exchange, Foreign, Fluctuations in, C. Bosanquet on, 169 *a*; Causes of, 771 *abcd*; and fall in gold price of Silver, 771 *cd*.——Exchange, Indian, Brit., 776 *b*-777 *c*; Dutch, 773 *a*-776 *b*.——Exchange, Internal, and Banks, national, U.S.A., 777 *d*; and Clearing syst., 777 *d*; Mod. facilities for, 777 *c*.——Exchange, International, and Bi-metallism, 148 *ab*; and Latin Union, 36 *a*; in Middle Ages, 22 *bc*, 85 *a*.——Exchange, Medvl., Italians or Lombards, 342 *c*; Jews, 342 *c*.——Exchange, Royal, compd. with Foreign institutions, 767 *d*-768 *b*; founded by Sir T. Gresham, 767 *b*.——Exchange, Value in, determined by Diffic. and Utility, 759 *d*; Subjective and Objective, Austrian Sch. on, 814 *d*, 816 *c*.——Under unlimited Competition: measured by Cost of Prodn., 761 *b*; not measured by Cost of Prodn., 760 *d*; A. Smith on, 815 *bc*.——Exchange Value of Money, 816 *c*; Under Monopoly: One-sided, 760 *b*; Two-sided, 759 *d*.
Exchanger, Royal, hist. of office: 724 *d*, 778 *d*.
Exchequer: Exchequer Bond, and Conversion of Brit. National Debt, 786 *a*; Exchequer, Closing of by Charles II., effects, 786 *bc*; in Scot., 784 *a*.——Exchequer Bill, compd. with Exchequer Bond, 785 *bc*; Funding of, 785 *a*; Hist. of, 784 *bcd*.——Exchequer, Medvl., 779 *b*-780 *b*; and Deprec. of Coinage, 780 *c*; Pipe rolls, 780 *d*; Records of, 780 *d*.——Exchequer, Mod., Budget, 185 *b*, 781 *c*, 828 *a*-830 *b*; Comptroller-general and auditor of, 71 *d*, 72 *ab*; Consolidated Fund, 389 *d*, 781 *c*, 782 *b*; Parly. control, 783 *a*, 828 *a*; Supply, 782 *bc*; dist. fr. Treasury, 783 *c*.
Excise: dist. fr. Customs Duties, 786 *d*; Indirect tax, 787 *a*; Statistics of, 787 *d*, 789 *ab*; Sir R. Walpole's reform of, 787 *b*.——Excise Scheme of Sir R. Walpole, econ. Merits, 788 *b*; A. Smith's approval, 789 *a*; Unpopularity, 788 *cd*.
Expenditure: Meaning of word, 790 *d*.
Experience: infl. of in Deductive Meth., 791 *ab*; Relative value of, 791 *a*.
Experiment: compd. with Observation, 791 *d*.
Experimental Meth.: use of in Econ. sci., 792 *ab*; use of in econ. Legisl., 792 *b*; J. B. Say's use of term, 792 *c*.
Expert: Econ., different classes of, 793 *a*; Relative value of, 792 *d*.
Exports: Brit., 1854-1890, 339 *b*-340 *d*; Foreign, 340 *cd*; "Invisible," 886 *c*-887 *c*.——Exports, Duties on, in Colonies, Brit., 795 *d*, 796 *a*; Eng., 794 *a*-795 *b*; Foreign countries, 797 *a*; Incidence of, 797 *a*; Ind., 796 *b*; J. R. M'Culloch on, 795 *c*; discouraged by Merc. Syst., 795 *c*; Origin of, 794 *a*; absence of, in U.S.A., 796 *d*; mod., in W. Indies, 796 *bc*.
Expropriation: Compensation for, 798 *abc*; Necessity of in certain cases, 797 *bc*; Princ. of, 797 *d*.

Factories, as syst. of Colonisation: 321 *bc*.
Factory Acts, 835 *c*-836 *d*; Employment of Children, 1903, 836 *a*; Employment of Women,

Young Persons, and Children, 1920, 835 *d*; Hist. and effects, 278 *bcd*, 683 *d*; and **Restrns. on Labour**, 179 *b*, 278 *cd*, 835 *c*-836 *d*; **Factory Legislation**, U.S.A., 831 *d*, 836 *d*. ——**Factory Syst.**, Rise of, 278 *ab*.

Famine: **Depopulation** as symptom of, 553 *cd*.

FARR, W.: and **Census**, 239 *b*; and **Mean afterlifetime**, 497 *d*, 790 *b*.

Fashion: form of **Custom**, 476 *d*.

Fauquier, F., influence on T. Jefferson: 805 *b*.

Federal Reserve System, **Banking**, U.S.A., 113 *d*-114 *b*, 820 *d*-822 *a*; discourages branch **Banking**, 307 *d*.

FERGUSON, A.: similarity of views to A. SMITH'S, 733 *b*.

Feudalism: Advantages of, 53 *bc*; Char. of, 738 *b*; struggle of medvl. City with, 292 *cd*; Irish **Coshery**, 434 *b*; Defects of, 299 *a*.——Feudal Incidents, **Aid**, 30 *b*; **Escheat**, 753 *d*.

FICHTE, J. G., on **Development**: 573 *a*.

Final Degree of Utility: **Austrian Sch.** on, 73 *b*, 815 *b*-816 *acd*; J. BENTHAM on, 133 *b*; W. S. JEVONS on, 378 *c*, 393 *d*, 766 *b*, 815 *b*; compd. with **Total Utility**, 569 *b*, 570 *a*.

Finance, ARISTOTLE on, 813 *b*-814 *a*; Training in, Birmingham, 875 *d*; Cambridge and Oxford, 879 *bc*, 880 *b*; U.S.A., 882 *cd*.

Finances: and **Cameralistic Sci.**, 207 *d*, 208 *a*; **Dutch Sch.** on, 659 *a*; Russ., G. CANCRIN, 210 *b*.——**Finances**, Brit., **Appropriation**, 811 *d*; **Budget**, 185 *b*, 828 *a*-830 *d*; **Deficiency Advances**, 533 *bc*; **Deficiency Bills**, 533 *cd*; of the Great War, 828 *a*-829 *b*, 854 *c*-855 *c*.——**Finances**, Brit. Imperial, **Expenditure**: **Conversion of National Debt**, 854 *c*-855 *c*.——**Revenue**: **Customs**, 828 *a*-829 *c*, 830 *bcd*; **Excise**, 828 *a*-829 *c*.——**Finances**, **Fr.**, L.-E. de CORVETTO, 434 *a*; **Dépôts et Consignations**, 560 *d*.——**Finances**, medvl., **Comptes**, **Chambre des**, 380 *cd*; **Dialogus de Scaccario**, 576 *bc*; **Domaine**, 628 *bc*.

Fisheries, U.K., Sir J. CAIRD inspects, 833 *b*.

FLEETWOOD, W.: on **Debasement of coin**, 731 *d*; **Prices** of corn and other commodities, 731 *d*.

Forests: **Assart** or **Essart**, Purpresture, and **Waste**, 754 *c*; Forestry in Scotland, 802 *a*.

Forfeiture: 422 *b*.

FOURIER, C.: V. P. CONSIDÉRANT on system of, 852 *cd*; on **Co-operation** and social organisation, 364 *a*.

FRANKLIN, B.: economic opinions and influence, 804 *d*, 805 *a*; infl. in England and France, 805 *b*; on rate of increase of **Population** in U.S.A., 805 *a*.

Freehold: 422 *b*.

Free Trade: **Anti-Corn-Law League**, 42 *d*; Sir E. BAINES on, 83 *c*; F. BASTIAT on, 123 *c*; Bill of 1846, 42 *d*, 424 *d*; and **Bounties**, 172 *b*; Lord BROUGHAM on, 181 *b*; **Budget**, 1852, 187 *d*, 188 *a*; E. BURKE on, 88 *b*, 195 *b*; Sir J. CAIRD on, 833 *a*; G. CANNING and, 211 *c*; D. CARAFA on, 225 *a*; C. B. di CAVOUR on, 237 *ab*; M. CHEVALIER on, 276 *c*; Sir J. CHILD on, 277 *b*; appl. to **Coasting trade**, 313 *d*; W. COBBETT on, 315 *c*; R. COBDEN on, 316 *d*; R. COKE on, 319 *a*; and **Colonies**, 323 *b*, 325 *abcd*; Marquis de DANGEUL on, 480 *c*; M. DELFICO on, 538 *a*; and **Dock**, 616 *a*; **Dutch Sch.** on, 658 *d*; D. GRASWINCKEL on, 656 *bc*; H. GROTIUS on, 656 *a*.——**Free Trade**, Exceptions to, admitted by A. SMITH, 352 *d*.——**Free Trade** and **Reciprocity**: H. CLAY on, 305 *b*.

Freight: and **Adjustment**, **Average**, 9 *cd*.

French Sch. of P.E.: infl. on **American Sch.**, 805 *bc*, 806 *bc*, 807 *d*, 808 *a*; infl. of **Eng. Sch.** on, 733 *a*.

Friendly Societies: J. ACLAND and, 8 *c*.

Functions: mathematical, compd. with **Curves**, 474 *ab*.

Funding: of **Debt** to U.S.A. 830 *a*, 855 *bc*; of **Exchequer Bills**, 785 *a*.——**Funding syst.**, T. CHALMERS on, 256 *ab*; and **National** or public **Debt**, 507 *a*, 830 *a*, 855 *bc*.

Gallatin, A., financial administration of: 806 *ab*.

Game Laws: Fr. **Capitainerie**, 217 *b*.

Gavelkind, inher. by: 178 *b*, 420 *ab*.

Geometrical Ratio, and T. R. MALTHUS' doctrine of **Population**: 57 *b*.

GEORGE, H.: infl. in America, 808 *d*; on **Land taxation**, 808 *d*.

German Sch. of P.E.: **American Sch.** and, 809 *c*; **Austrian Sch.** and, 814 *c*, 817 *bc*; W. CUNNINGHAM influenced by, 859 *d*; mod. sch. on **Value**, 763 *d*, 764 *b*.

GIDDINGS, F. H.: 809 *d*, 810 *a*.

Gilds: Anglo-Saxon, 428 *d*; infl. of medvl. Church, 720 *c*; Florentine, and revolt of **Ciompi**, 288 *b*; in Eng., hist. of, 428 *d*-430 *c*; Industrial, compd. with merchant **Companies**, 373 *d*, 429 *b*; as econ. Organisation, 302 *d*; Origin of, theories as to, 293 *c*, 429 *a*; Religious, in Middle Ages, 429 *c*.——**Gilds**, Craft, or **Corporations**; and **Apprenticeship**, 45 *cd*, 430 *a*; Roman **Collegium**, 320 *d*, 429 *a*; Journeymen's **Compagnonnages**, 367 *d*; Const. of, 429 *c*; Decline of, 18th centy., 430 *b*; rel. to **Journeyman**, 430 *a*; **Livery** of, 372 *a*; in London in Middle Ages, 372 *a*, 430 *a*; Origin of, 429 *a*; favoured by Plantagenets, 429 *d*; A. SMITH on, 430 *b*; reguln. of, under Tudors, 430 *a*.——**Gilds**, Fr., organised by J. B. COLBERT, 431 *a*; Hist. of, 430 *c*-431 *b*; **Jurande** or managing **board**, 430 *c*; abolished by A. R. J. TURGOT, 431 *b*. ——**Gilds**, Ger., or **Zünfte**, Decline of, 431 *c*; K. A. von HARDENBERG and abolition of, 431 *d*, 432 *a*; Hist. of, 431 *bc*.——**Gild** Merchant, rel. to **Borough**, 293 *cd*, 372 *a*, 428 *d*; Const. of, 428 *d*; struggle with **Craft gilds**, 294 *a*, 429 *b*; medvl. Powers of, 293 *d*.

GODIN, J. B. A.: **Familistère**, 289 *a*, 413 *a*.

GODWIN, W.: on B. FRANKLIN'S estimates of American **population**, 805 *a*.

Gold: Appreciation of since 1873, Birmingham Sch. on, 67 *c*.——**Gold** Bullion, **Autumnal Drain** of, 73 *d*, **Gold**, **Currency Notes** exchangeable for, 860 *c*, 869 *a*; **Gold**, Discoveries of, J. E. CAIRNES on effects of, 202 *c*; and **Prices**, 16th centy., 344 *a*.——**Gold**, **Drain** of, in **Crises**, 868 *bd*, 869 *ab*.——**Gold** as Stan. or measure of value, M. CHEVALIER on, 276 *d*; introd. into Ger., 1872, 773 *d*; in Holl.,

étalon boiteux of 1875, 774 *ab*; estab. by 2nd Earl of Liverpool in Eng., 1816, 147 *ab*.—Gold reserve, Drain of Bullion and, 868 *d*, 869 *bc*; U.S.A., 114 *a*, 821 *d*, 822 *a*.—Gold, Value of, infl. of Bimetallism on, 148 *cd*; Gold, withdrawn from circulation, 860 *c*.

Goldsmiths, banking operations of, 17th centy.: 93 *c*.

Goods: Collective, 320 *c*; Complementary, K. Menger on, 380 *ab*; Consumption and prodn., 392 *a*; of 1st, 2nd, and 3rd order, and Prodn., instr. of, 380 *ab*, 392 *a*, 393 *b*, 815 *cd*.

Gossen, H. H.: Exchange, 766 *a*; theory of Value, 814 *d*.

Government: St. Thomas Aquinas on, 49 *b*; by Aristocracy, 53 *abc*; J. Bodin on theories of, 161 *a*; J. Calvin on, 204 *c*; D. Diderot on, 579 *ab*; Intervention, H. Sidgwick on, 194 *b*; W. S. Jevons on functions of, 194 *b*; J. S. Mill on, 194 *c*.

Granger organisation, U.S.A.: Railway legisl. and absentee, 4 *a*.

Graswinckel, D.: on Free Trade in corn, 656 *bc*; rise of Prices, 656 *cd*.

Graunt, J.: and Demography, 57 *a*, 545 *a*, 731 *c*.

Gresham, Sir T.: econ. Empiricism, 704 *a*; founder of Royal Exchange, 767 *b*.

Grotius, H.: on Eminent Domain, 702 *ab*; Free Trade, 656 *a*; Int. and Usury, 656 *b*; Money, 656 *b*; Property, 285 *d*; Value, theory of, 656 *b*.

Guinea Co.: 18 *d*, 330 *a*.

Habit compd. with Custom: 476 *b*.

Hague Conferences: on Arbitration, International, 812 *b*-813 *b*; on law of Bills of Exchange, 145 *b*; on Contraband, 399 *b*; on Declaration of War, 521 *c*; limitation of action for recovery of contract debts, Drago Doctrine, 868 *ab*; on privateering, 520 *c*-521 *a*.

Hales, J., 16th centy. economist: 261 *a*, 722 *b*, 730 *b*.

Hamburg Co.: 18 *a*, 375 *c*.

Hamilton, A.: financial achievements of, 805 *cd*; A. Smith and, 805 *c*.

Hanse of London, organisation and privileges of: 341 *b*, 343 *b*.

Hanseatic League: Articles of trade, 342 *b*; and medvl. Carrying Trade, 342 *b*, 349 *a*; Decline of, 350 *a*; Hist. and position of, 669 *a*; and Merchant Adventurers, 17 *bcd*, 343 *b*; and Steelyard, 17 *bcd*, 373 *d*, 669 *a*.

Hardenberg, K. A., Prinz von: and abolition of Gilds, 431 *d*, 432 *a*.

Harmonies of Econ.: and Individualism, 675 *ab*; Liberty a condition of, 675 *a*.—Harmonies, F. Bastiat's theory, 4 *d*, 123 *d*, 674 *d*.

Health, Ministry of, 11 *d*, 13 *b*, 428 *a*.

Hegel, G. W. F.: on Development of society, 573 *a*.

Helvetius: and Self-int., 128 *a*.

Higgs, H.: on conditions of a scientific school, 804 *b*.

Hildebrand, B.: on Utility and Value, 765 *c*.

Historical Meth.; T. von Bernhardi, 135 *d*; and princ. of Development and Relativity, 573 *a*, 675 *d*; J. S. Mill on, 735 *a*; rel. to Organic view of society, 675 *d*.

Historical Sch.: American Sch. influenced by, 809 *cd*; A posteriori meth., 43 *b*; A. Comte and Sociology, 382 *d*, 383 *cd*; W. Cunningham and, 859 *d*; and Deductive Meth., 524 *d*, 675 *d*; and Laissez-faire, 286 *c*; and Protestantism, 286 *b*.

History: J. E. T. Rogers on, 735 *a*.—Econ. Hist., rel. to Theory, Concurrent view, 675 *d*; Corrective view, 675 *c*; Handmaid view, 675 *c*; No-connexion view, 675 *b*; Supersession view, 675 *d*.

Hobbes, T.: on Wealth, national, 731 *a*.

Horne, Sir R., Budget of, 829 *d*.

Horner, F.: and Bullion Committee, Report of, 191 *d*.

Hours of Labour, Restriction of Children's, 836 *abc*.

Housing: report of Building Societies on, 831 *c*; Housing of the Working Classes Acts, Compensation allowed by, 376 *a*, 381 *c*.

Huber: on Conflict of Laws, 387 *b*.

Hudson's Bay Co.: 326 *d*, 330 *b*, 331 *c*, 611 *b*.

Humanism: and Protestantism, 286 *d*.

Humanisme, term invd. by N. Baudeau: 125 *c*.

Hume, D.: on Balance of Trade, 87 *ad*, 732 *c*, 733 *c*; Int., variations in rate of, 733 *c*; on Merc. Syst., 733 *c*; National Debt, 733 *c*; against Paper Currency, 804 *d*; Population, anc. compd. with mod., 732 *c*, 733 *c*; Social Contract, 728 *b*.

Hutcheson, F.: anticipation of J. Bentham's "greatest happiness of the greatest number," 132 *d*, 733 *b*.

Hypothesis: as assistance to Observation, 791 *c*.

Ideal Commonwealths: E. Cabet's *Icarie*, 198 *bcd*, 365 *d*; T. Campanella's *Civitas Solis*, 208 *b*; Sir T. More's *Utopia*, 198 *b*, 362 *d*; Plato's *Republic*, 362 *c*.

Immigration: and Emigration, 700 *b*.—Immigration, Alien, 802 *b*-803 *a*.

Imperial Unity: and Colonies, self-governing, 841 *b*-843 *b*, 844 *c*-845 *b*; Conferences, 843 *b*, 844 *bd*; and Preferential Trading, 15 *d*, 830 *d*, 845 *b*.—Imperial Council, continuous, suggested, 844 *a*; Imperial organisation, 843 *a*-845 *b*; Imperial "Secretariat," 844 *b*.

Imports: Foreign, 340 *c*.—Imports, Brit., 1854-90, 339 *b*-340 *d*; excess over Exports, 886 *cd*; and int. on Foreign investments, 340 *b*.—Import Duties, Book of Rates, 167 *d*.

Impôt Unique: Span. Alcavala, 30 *d*; B. Dávila's Poll-tax, 485 *a*; Dîme Royale, S. le P. Vauban's, 537 *b*, 583 *abc*; P. S. Dupont on, 653 *c*.

Impressment, G. Everett on: 757 *d*.

Income, F. Wieser on theory of: 816 *d*-817 *a*.

Income Tax: in U.K., reimposed 1842, 187 *d*; increase in, during Great War, 828 *ac*, 829 *a*; Super-tax, increase in, 828 *ac*, 829 *a*.

Increment, unearned: H. George on appropriation of, 808 *d*

India Companies, Fr.: 319 *c*, 330 *b*, 670 *b*.
India: Imperial Bank of, 819 *d*-820 *b*; Council Bills, 442 *a*, 776 *d*; Gov. of, 14 *b*; closing of Mints, 1894, 776 *d*-777 *b*.
Individualism: J. Bentham, 133 *ab*; M. Delfico, 538 *a*; and Harmonies of Econ., 675 *ab*; and Protestantism, 285 *abc*.
Indorser: 6 *c*, 144 *b*; in Blank, 155 *b*.
Inductive Meth.: Agreement and diff., meth. of, 792 *a*; Classical Sch. and, 526 *a*; and Deductive Meth., necessity of combination, 526 *ab*; Sir F. M. Eden on, 679 *c*; A. Smith's use of, 734 *a*.
Industrial: Industrial Agreements, Engineering and Allied Industry, 884 *c*-886 *b*; collective bargaining, 884 *d*, 885 *ab*; decisions as to apprentices, etc., 884 *d*, 885 *b*; Employers, Federation of, 884 *c*; Employers and Trade Unions, mutual recognition of rights of, 884 *d*, 885 *abc*; machine tools, 884 *d*, 885*b*; overtime, 884 *d*, 886*a*; procedure for dealing with questions arising, 885 *d*-886 *a*; Trade disputes, 884 *c*, 885 *abc*; Wages, 885 *d*; Works Committees, 886 *a*.——Industrial Council, Board of Trade, 824 *b*.——Industrial Disputes, avoidance of, 884 *c*, 886 *a*; by Bureau of Labour, U.S.A., 831 *d*.——Industrial Employment of children, 835 *c*-836 *ac*.——Industrial Partnership, compd. with Co-operation, 419 *d*.——Industrial Revolution, and Trade, 345 *a*.——Industrial Statistics, by Bureau of Labour, U.S.A., 832 *ab*.
Industries: Interdependence of, and Divis. of Labour, 409 *d*, 610 *b*.——Industries, Subsidiary, and Divis. of Labour, 609 *a*.
Industry: and Econ. Freedom, 674 *b*.——Domestic Syst. of Industry, Arguments for and against, 630 *cd*; Char. and advantages, 630 *bc*; causes of Decline, 630 *c*; and Sweating, 630 *d*.——Gov. Reguln. of Industry, J. Bentham on Board, 156 *d*.——Mechanics of Industry, and Equilibrium, W. S. Jevons on, 581 *b*, 749 *b*; and Total Utility, 581 *b*.
Infants, Disabilities of: 587 *d*.
Inheritance: Bonorum possessio, Roman law, 164 *c*; Borough Eng., to youngest son, 168 *c*; Co-parceners, 420 *a*; Dead's part, 486 *b*; and Domicil, 631 *d*; Entail, Eng., 738 *b*-740 *c*; Entail, Scot., 740 *d*-741 *b*; Escheat, 753 *d*; Gavelkind, 178 *b*, 420 *ab*; Sir H. Maine on law of, 570 *d*; Primogeniture, derived from feudalism, 455 *b*; in Roman law, 130 *d*, 164 *c*, 790 *a*; Tanistry, 178 *c*.
Insurance: A. de Courcy on, 445 *a*.——Insurance, Life, Actuary, 8 *d*; F. Baily on, 83 *a*; Bonus, 164 *d*; and Death-rate, 497 *cd*.——Insurance, Marine, and Average, general, 9 *c*, 74 *d*; Bottomry, loan on, 170 *bc*; and Canon law, 213 *bc*.——Insurance, National, Compulsory Preference of arrears in, 381 *b*.——Insurance, Unemployment, 824 *b*.
Interest: Accrue, 7 *a*; N. Barbon on, 120 *ab*; marginal productivity, theory of, I. Butt on, 832 *d*; effect of Certainty, 251 *c*; Compound, 39 *c*, 380 *b*.——Int., Rate of, in Banks, popular, 109 *c*, 110 *b*; in Colonies, 324 *bc*; D. Hume on variations in, 733 *c*; Natural, J. Massie on, 732 *d*; and Savings, 7 *d*, 110 *d*; Scot., 96 *ab*; tendency to Uniformity, 601 *a*.——Int. and Capital, Austrian Sch. on, 816 *d*, 826 *a*.——Int. and Usury, St. Antoninus on, 43 *a*; St. Thomas Aquinas on, 49 *ab*, 479 *cd*; Aristotle on, 54 *d*; J. Bentham's argument, 131 *ab*; C. Besold on, 136 *a*; J. Calvin's defence of, 205 *bcd*; J. Camerarius on, 208 *b*; evasion of Canon law against, 213 *b*-214 *a*, 217 *cd*; Sir J. Child on, 725 *c*, 731 *a*; opposed by medvl. Church, 212 *b*, 217 *c*, 719 *d*, 720 *bcd*; Sir T. Culpeper (elder and younger) on, 470 *cd*, 725 *b*, 730 *d*; F. T. De Vio on, 573 *c*; T. R. Dew on, 573 *d*; J. Eck on, *contractus trinus*, 673 *cd*; H. Grotius on, 656 *b*; examined by M. Mosse, 479 *d*; in Roman law, 39 *c*; C. Salmasius on, 136 *a*, 656 *d*.——Int. and Usury, Consumptibles and fungibles, 393 *a*; Damnum Emergens, 49 *b*, 479 *cd*; Lucrum Cessans, 49 *b*, 479 *cd*.
International Arbitration, 811 *d*-813 *b*; International Courts, 812 *c*-813 *a*.
International Labour Organisation, League of Nations, 835 *d*.
International Law: Angarie, droit d', 40 *a*; Declaration of London, 862 *c*-864 *a*; Decl. of Paris, 521 *c*, 864 *a*; Embargo, 695 *d*; Enemy Goods or property on land, 715 *a*; Enemy goods at sea, maritime capture, 715 *a*, 862 *d*-864 *a*.——International Law, Hague Conferences on, 812 *b*-813 *b*; Paper blockade, 520 *c*.——International Law, Neutral States, and Blockade, effective, 57 *d*, 156 *abc*, 397 *a*, 520 *c*, 863 *a*-864 *a*; Contraband trade, 398 *d*-399 *b*, 520 *c*, 521 *c*, 862 *b*-864 *a*.——International Law, Private, 387 *bc*; Conflict of Laws, 387 *bcd*; Domicil and Nationality, 631 *b*-632 *a*; Drago Doctrine, 867 *d*-868 *b*; Foreign judgments and procedure, 387 *bcd*, 631 *d*; Marriage and divorce, 631 *d*; and Will, 631 *d*.
International Trade: and Cost, Comparative, 434 *bc*; J. S. Mill on, 604 *a*; functions of Money in, 604 *a*.
International Value, and Demand: 748 *a*.
International Working Men's Assoc.: Anarchism and M. Bakounin, 38 *d*, 39 *a*; and Socialism, scientific, 361 *d*.
Intestate Succession: 14 *d*, 603 *cd*; Roman law, 164 *c*.
Investment: Aleatory, 31 *b*; in Land Banks, 108 *a*.
Ireland, econ. condition of: Sir F. Brewster on, 178 *d*; Irish Free State, Courts of, 449 *cd*; Northern Ireland, Courts of, 449 *bc*.
"Iron Law" of Wages: F. Lassalle on, 337 *d*; K. J. Rodbertus on, 337 *d*.

Jefferson, T.: French infl. on, 805 *bc*.
Jevons, W. S.: on Alternative stan. of value, 36 *a*; Appreciation of stan., 45 *b*; T. C. Banfield's anticipation of his views, 91 *c*; on Bimetallism, 36 *a*, 147 *cd*, 148 *d*, 149 *b*; Competition, 378 *c*; Consumption, utility as foundation of, 393 *d*; Deductive Meth., 524 *d*; invd. phrase, "Degree of utility," 536 *a*; on Diffic. of attainment, 581 *b*, 582 *a*; Distance in time, 592 *d*; Equilibrium and Mechanics of Industry, 581 *b*, 749 *b*;

Exchange, 766 *bc*; **Final utility and value**, 378 *c*, 393 *d*, 766 *b*, 815 *b*; **Gov.**, functions of, 194 *b*; the "legislator" of, 860 *a*; effects of two-sided **Monopoly**, 760 *a*; **Periodicity of Crises** and sunspots, tentative **hypothesis**, 461 *d*, 467 *ab*; **Tabular stan.**, 472 *b*; **Trade Unions**, 760 *a*; theory of **Value**, 814 *d*.

Jews, superseded by Italian money-lenders: 342 *c*.

JOHNSON, S., on **Excise**: 789 *a*.

Joint Products, special case of, **By-Products**: 197 *c*.

JONES, R.: on **Rent**, 734 *c*; crit. of D. RICARDO, 734 *c*.

Journeyman: **Compagnonnages** or **Journeymen's societies**, 367 *d*; rel. to **Gilds**, 430 *a*.

Jurisprudence and **Economics**, H. C. ADAMS on interdependence of: 800 *b*.

Jus naturae, **Jus naturale**, Natural law or right: St. Thomas AQUINAS on, 48 *b*; **Canon Law** on, 212 *a*.

Kartell or **Trust**: 229 *c*.

KERSSEBOOM, W., on **Life tables**: 657 *b*.

Key Industry: 852 *a*.

KLOCK, K., on **Taxation**, Proportional: 508 *c*.

Knights of Labour, U.S.A., 193 *b*.

Labour: **Agent of Prodn.**, 21 *bc*; **Children's**, under **Factory syst.**, 278 *b*; **Children's**, restrictions on, 835 *c*-836 *d*; as **Commodity**, E. BURKE on, 195 *a*; **Cost of**, and **wages**, T. BRASSEY on, 176 *d*; D. DIDEROT on, 578 *c*; Displacement of, by **Conversion of Arable** into Pasture, 49 *d*; and **Distance in time**, 593 *bc*; as highest order of **Goods**, 815 *d*; **Marginal**, and benefits of **prodn.**, 597 *c*; law of **marginal Utility** applied to, 815 *bc*; **prodn. of Utility**, 358 *a*; as source of **Value**, K. MARX on, 763 *cd*.——**Bureau of Labour**, Eng., 193 *a*; Switz., 193 *a*; U.S.A., 193 *b*, 831 *d*-832 *c*.——**Labour and Capital**, Antithesis, **fallacy** of Co-operative view, 706 *b*; real as regards **Distr.**, 600 *d*; **Earnings of management** a species of **wages**, 668 *b*; functions of **Employer** in mod. **industry**, 706 *a*.——Dept. of **Labour**, U.S.A., 811 *b*, 832 *a*; **Labour** Disputes, and **Apprenticeship**, **Statute of**, 46 *c*; **Arbitration** and **Conciliation**, 51 *b*, 384 *d*-385 *c*, 389 *abc*; **Engineering and Allied Industry Agreements**, 884 *c*-886 *b*.——**Division of Labour**, Arguments for and against, 610 *ab*; C. BABBAGE on, 76 *b*, 609 *b*; C. B. BECCARIA on, 127 *d*; coincident with creation of **Capital**, 608 *d*; dist. fr. **Combination of Labour**, 608 *c*; Dangers of, 609 *c*; and effectiveness of **Efficiency**, 609 *a*, 684 *c*; and Interdependence of **industries**, 409 *d*, 610 *b*; appl. to **Poor relief**, 266 *d*; and **Productivity**, 609 *b*; A. SMITH on, 409 *b*, 609 *ab*; and Subsidiary **industries**, 609 *a*.——**Efficiency of Labour**, effects of **Certainty** on, 251 *c*.——Elements in: Diligence, 685 *ab*; Physical vigour, 682 *d*-684 *a*; Skill, 684 *a*-685 *a*.——**Labour Exchange**, R. OWEN'S, and experiment in **Communism** at New Harmony, 365 *bc*.——**Labour Exchanges**, 824 *b*.——**Forced Labour, Corvée**: mod. Egypt, 433 *d*; and **Prestation**, Fr., 433 *bc*; and Suez Canal, 433 *d*.——**Hours of Labour, Children's Employment**, 836 *abc*; **Eight Hours' day**, Australia, 688 *ac*, 689 *d*; in **Utopia**, 362 *d*.——Knights of **Labour**, U.S.A., 193 *b*.——**Labour**, Ministry of, 824 *b*.——**Labour, Organisation of**, C. BABBAGE on, 76 *bc*; J. J. L. BLANC and, 65 *c*, 153 *d*; **Bourse du travail**, 174 *d*.——**Productive and Unproductive Labour**, T. CHALMERS on, 256 *b*; J. CRAIG on A. SMITH'S distinction, 857 *d*; J. S. MILL on, 358 *a*; A. SMITH on, 358 *a*, 857 *d*.——**Rent, Labour**, and **Black Death**, 28 *c*, 152 *b*, 261 *a*, 407 *a*; Commutation of, effect on **Manor** as econ. unit, 28 *c*, 152 *b*, 407 *a*.——**Restrictions on Labour, Boycotting**, 175 *c*; **Factory Acts**, 278 *cd*, 835 *c*.——**Right to Labour**, J. J. L. BLANC'S **Ateliers Nationaux**, 66 *a*; P. F. BONCERF on, 163 *b*.——**Labour** as measure of **Value**, T. R. MALTHUS on, 562 *c*.——**Value** of, J. DAVIDSON on, 862 *ab*.

Labour Party, first **Budget** of: 830 *bc*.

Labourer: condition of, 18th centy., R. CANTILLON on, 215 *c*.——Labourer, legal rel. to **Employer**, 706 *d*.——Labourer, Medvl., and **Allotment**, 32 *c*; and **Canon Law**, 212 *b*.

Lafayette: infl. on **American Sch.**, 805 *c*.

Laissez-faire: R. L. de V. de P. d'ARGENSON on, 52 *d*; J. BENTHAM on, 133 *b*; J. BRIGHT on, 179 *b*; E. BURKE on, 195 *b*; J. E. CAIRNES on, 194 *c*; T. CARLYLE on, 227 *d*; C. B. di CAVOUR on, 237 *d*; R. COBDEN on, 316 *b*; and **Consumption**, 394 *d*, 395 *a*; and **Doctrinaire**, 623 *c*; E. DUCPETIAUX on, 645 *b*; P. S. DUPONT on, 653 *c*; and **Evolution**, H. SPENCER on, 482 *a*; and **Historical Sch.**, 286 *c*; and **Manchester Sch.**, 237 *d*; B. MANDEVILLE on, 732 *b*; J. S. MILL on, 194 *c*; Objections to, 380 *a*; and Protestantism, 285 *ad*; J. C. L. S. de SISMONDI on, 286 *c*.——**Laissez-faire** in Amer., **Orthodox Sch.**, 539 *ab*.——**Laissez-faire Sch.**, 735 *b*.

Land: as **Agent of Prodn.**, 21 *bc*; for **Allotments**, compulsory acquisition of, 803 *ac*; **Bocland**, 35 *d*, 160 *d*; **Compensation** for compulsory taking of, 375 *d*-376 *a*, 381 *bcd*; **Compensation** for tenant's improvements, 376 *abc*, 800 *cd*, 801 *cd*; **Copyhold, Enfranchisement** of, 422 *b*, 717 *b*; **Copyhold**, abolished by Law of **Property** Act, 1922, 422 *bc*; **Distr.** of, W. BELL on, 129 *bc*; **Entail**, 738 *b*; and **Feudalism**, 738 *b*; **Folkland**, 35 *b*, 160 *d*; Life tenant, present position of, 739 *bc*, 755 *a*; small quant. of let out as substitute for **Poor relief**, 755 *b*; **Servitudes** and **Easements**, 668 *c*; **Settlement**, 739 *a*.——**Land Banks**: Advantages, 107 *d*; J. ASGILL'S scheme, 179 *c*; Austro-Hungary, 108 *c*; rivalry with Bank of Eng., 257 *ab*; N. BARBON'S, 119 *a*, 120 *d*; assoc. of Borrowers, Ger., 107 *a*; J. BRISCOE'S scheme, 179 *c*; H. CHAMBERLEN'S scheme, 257 *ab*; F. CRADOCKE'S proposal, 451 *a*; **Crédit Foncier**, Fr. 108 *b*, 454 *bcd*; assoc. of Lenders, Ger., 108 *a*; under State Control, Ger., 108 *d*; conditions of Success, 107 *d*.——**Crown Lands**, in **Colonies**, 324 *a*, 469 *c*; **Foreshore**, 469 *b*; and **Forfeiture**, 469 *c*; in Middle Ages, 469 *a*.——**Land**, Ecclesiastical,

in Middle Ages, protected against Alienation, 282 *a*; superior Cultivation of, 282 *d*; subject to Scutage, 282 *c*.——Holdings of Land, Large, Advantages of, 471 *ab*.——Land Legisl., Irish, Court of Irish Land Commission, 449 *d*; conversion of Tenant into Proprietor, 179 *b*.——Land, Nationalisation of, and Compensation, 376 *c*; P. E. Dove on, 636 *a*; T. Evans on, 757 *a*; T. Spence on, 736 *a*.——Land, Ownership or Property in, Colonial lands, 324 *a*; in Eng. law, 422 *bc*, 754 *d*; Law of Property Act, 1922, 14 *d*, 15 *b*, 422 *bc*.——Land Registration, 199 *d*, 200 *a*.——Land Revenue, auditors of, 71 *d*.——Land, Taxation of, H. George and, 808 *d*.——Land Tenures, Alod, 35 *bd*; Bede, 128 *d*; Benefice, 130 *a*; Cens, Fr. 18th centy., 237 *d*; Copyhold, 422 *b*, 544 *b*, 717 *b*; Cornage, 426 *d*; Cottiers, 439 *bc*; Day work, 485 *d*; Drengage, 641 *a*; Extraneus, 798 *d*; Feudal, char. and advantages, 53 *b*; Frankalmoign, 282 *c*; Heriot, 422 *b*; Molmen, 685 *b*, 782 *d*; Precariae, 25 *b*; statute Quia Emptores, 544 *b*; Villanus, Villein, or Yardling, 25 *a*, 28 *c*, 544 *bc*; Virgate or Yardland, 25 *a*; Week-work, 25 *b*.——Land Tenures, in Roman law, Emphyteusis, 703 *c*; Precarium and locatio, 130 *a*.

Landlord: Agricultural, position of, 27 *a*, 690 *d*, 800 *c*-801 *d*, 803 *c*.——Landlord and tenant, Compensation for improvements, 376 *abc*, 800 *cd*, 801 *cd*; Fixtures, 801 *b*; duration of Lease, 801 *a*, 803 *c*; Rent, 742 *c*.

Lassalle, F., on "Iron law" of wages: 337 *d*.

Latin Union: and Bimetallism, 36 *a*, 146 *d*, 147 *c*, 149 *a*; and Decimal syst., 515 *d*; and restrns. on coinage of Silver, 1874, 147 *b*; Treaty of 1865, 35 *c*.

Law, Bonar, Budget of: 828 *d*.

Law, J.: and development of syst. of Credit, 452 *c*, 732 *a*; Mississippi scheme, 182 *d*.

Law: Administrative, 13 *d*; Brehon, early Irish, 178 *a*; Canon law, dist. fr. Civil law, 297 *b*; Code Napoléon, 317 *d*; Feudal, 299 *a*; Social and physical, H. C. Carey on identity of, 226 *b*.——Law, Eng. Common, based on Custom, 299 *b*; of Property, 299 *c*, 422 *bc*.——Courts of Law, Eng., 448 *b*; Irel., 449 *bcd*; Scot., 449 *d*-450 *b*.——Medvl. courts: Staple, Eng., 374 *b*.——Mod.: Fr., 318 *ab*; Lord Mansfield the founder of, 299 *d*, 347 *b*; Problems affecting, 300 *a*.

Laws of P.E.: Confusion in use of term, 676 *a*; of Cost of Prodn., 437 *d*; of Demand, 541 *a*; of Dimin. returns, 173 *a*, 585 *a*; of Dimin. Utility, 523 *d*, 541 *a*; of Distr., 599 *cd*; of Supply, 438 *c*; statements of Tendency, 676 *c*.

Legislation: D. Diderot on, 578 *c*; P. E. Dove on, 636 *a*.——Legisl., Econ., on qual. of Cloth, 72 *d*; use of Experimental Meth., 792 *b*; Medvl., 28 *c*.——Legisl., Elizabethan, Apprenticeship, Statute of, 46 *bc*, 430 *a*.

Le Play, P. G. F.: anticipated by R. Cantillon, 215 *c*; Sch. of, 284 *c*.

Leslie, T. E. Cliffe: on American Sch. of P.E., 809 *a*; on Competition, 378 *b*; on Deductive Meth., 525 *ab*; founder of Eng. Historical Sch., 735 *a*; Wages Fund theory, 809 *b*.

Levant or Barbary or Turkey Co.: 18 *a*, 271 *b*, 330 *a*, 343 *d*, 344 *c*, 375 *c*, 669 *c*, 726 *b*, 728 *a*, 729 *b*.

Levi, L., historical writing of: 859 *a*.

Liberty, F. Bastiat on: 123 *cd*, 675 *a*.

Libraries, Economic: Foreign Office, 873 *bc*.——Goldsmiths' Company's Library, 870 *a*-872 *b*.——London School of Economics, 873 *c*.——Manchester Libraries, E. Chadwick's collection, 872 *d*; R. Cobden's influence in founding Athenæum, 872 *c*; W. S. Jevons's collection, 873 *a*; Nicholas Magens' collection, 872 *d*; John Rylands Library, 873 *b*.——Royal Statistical Society, 873 *b*.——U.S.A., 873 *c*-875 *b*; Crerar Library, John, Chicago, 874 *a*-875 *b*.

Licenses: Continental War, and Continental Syst., 397 *d*; and Orders in Council, 397 *d*.

Life: Expectation of, or Mean Afterlifetime, 497 *d*, 790 *b*.——Life Tables, calcul. of, W. Farr on, 497 *d*, 790 *b*; E. Halley, 657 *b*; W. Kersseboom, 657 *b*; J. Milne, 242 *c*.

List, F.: on term "American P.E.," 804 *b*; American Sch. and, 806 *d*, 807 *a*; Protn., 171 *b*; Skill as capital, 220 *b*.

Livery, of Gilds, craft: 372 *a*.

Lloyd George, D., Budget of: 188 *c*, 828 *ab*.

Loan: Benevolences and subsidies, 130 *d*; on Bottomry, 169 *d*-170 *d*; and Terminable Annuities, 42 *b*.

Local: Local Administration, Areas, 12 *ab*; and Betterment, 136 *cd*; rel. to Central, 10 *d*, 13 *ab*; A. Smith on, 156 *d*.——Local Authorities, By-law and legislative powers, 196 *d*; Const. and functions, 12 *bcd*; powers in Poor relief, 251 *b*.——Local Finance, Princ., 62 *b*; Rate, 444 *cd*.——Local Gov., County Borough, powers, 443 *d*; County Council, powers, 444 *ab*; Functions of, 12 *d*, 296 *bc*; in Middle Ages, 11 *c*; Princ. of, 250 *d*; Syst. of, 12 *bc*.

Locke, J.: on Distance in time, 592 *c*; and Merc. Syst., 728 *b*, 729 *a*; on silver Monometallism, 146 *d*; Silver, coinage of, 729 *a*, 731 *c*; Value in use and exchange, 762 *d*.

Logic and P. E., J. E. Cairnes: 202 *a*, 525 *c*.

Logismography: 165 *d*-167 *d*.

Lombards, medvl. Bankers, hist. of: 342 *c*.

London: C. Booth's study of life in, 826 *cd*; Port of, 866 *cd*, 867 *b*.

Lowndes, W., on amendment of Silver coinage, 1695: 729 *a*, 731 *c*.

Luck or Conjunctur, and Rent, Socialist view, 388 *a*; infl. on Speculation, 387 *d*.

Lucrum Cessans: Canon Law based on Roman Law, 479 *c*; dist. fr. Damnum Emergens, 49 *b*, 479 *c*.

Lunacy, Property of Lunatics: 588 *bc*.

Luxury, D. Diderot on: 578 *cd*.

Mably, G. B. de, on Communism: 363 *b*.

M'Culloch, J. R.: on Absentee, 3 *c*, 623 *d*, 624 *a*; infl. on American Sch., 806 *c*; Direct Taxation, 586 *d*; Exports, duties on, 795 *c*; W. Douglass's work reprinted by, 804 *c*;

historical writing of, 859 *a*; Indirect Taxation, 396 *a*; National Debt, 507 *d*; D. Ricardo, 734 *c*.
Machinery: effect on Labour, skilled, 684 *d*. ——Machinery, Econ. functions of, 694 *a*; C. Babbage on, 76 *c*-77 *a*; J. Bentham on, 132 *b*; W. Cobbett on, 315 *d*.
McKenna, R.: Budget of, 828 *b*; Duties imposed by, 828 *b*, 829 *b*, 830 *c*.
McVickar, J.: works of, 806 *c*.
Magna Charta: Amercements and Waynage, 37 *c*; Foreign traders, protn. of, 341 *d*, 354 *b*.
Malthus, T. R.: American Sch. and, 804 *b*, 805 *a*, 806 *b*, 807 *c*; and Arithl. ratio, 57 *b*; C. B. Beccaria's anticipation of, 127 *d*; crit. by H. C. Carey, 807 *c*; and F. J. de Chastellux, 273 *b*; and Checks on Population, 273 *bc*; argument against Communism, 367 *a*; on Definitions, 534 *c*; on law of Dimin. returns, 585 *b*; on Egoism, 686 *cd*; P. Esterno a follower of, 755 *c*; material from B. Franklin, 805 *a*; on Labour as measure of value, 562 *c*; on Rent, 734 *b*; on Value in use and exchange, 763 *b*; doctrine of Population, 242 *c*, 734 *a*; Darwinism and natural selection, 481 *d*; and Dutch Sch., 658 *b*; opposed by A. H. Everett, 757 *b*; and Geometrical ratio, 57 *b*.
Malynes, G. de: on exportation of Bullion, 723 *c*; on decay of Trade, 723 *b*.
Manchester Sch.: infl. of, 317 *a*; Laissez-faire application of P.E., 237 *d*; on War, 317 *a*.
Mandeville, B.: on Laissez-faire, 732 *b*; "Private vices public benefits," 732 *b*.
Manor: Amercements, 37 *c*; Court rolls, manorial accounts and extents, 447 *b*-448 *b*; Reeve, 24 *d*; F. Seebohm on, 25 *d*, 359 *bc*; conn. with Tribe, 26 *b*.——Manor, as Econ. unit, Anglo-Saxon period, 25 *d*; after Norman Conquest, 25 *ab*, 28 *b*.
Manufacture: C. Babbage on, 76 *b*, 77 *a*; Sir F. Brewster on, 178 *d*.
Margin of Prodn., marginal Disutility of labour: 597 *c*.
Marginal Utility: compd. with Total and Value, 73 *b*, 569 *b*, 570 *a*; Law of, 815 *bcd*, 816 *abc*.
Mark syst.: theory of voluntary assoc. of Freemen, Kemble and Von Maurer, 25 *d*, 359 *a*; theory of Roman *Villa*, N. D. Fustel de Coulanges and F. Seebohm, 25 *d*, 26 *a*, 359 *b*; Ind. Village communities, Sir H. Maine's view, 24 *a*, 359 *a*.
Marriage, and Domicil, 631 *cd*.
Marshall, A.: infl. on American Sch., 810 *b*.
Marshall, W., on Agriculture: 24 *a*.
Marx, K.: work with F. Engels, 884 *a*; on Labour as source of value, 763 *cd*; and scientific Socialism, 735 *a*.
Massie, J., on Int., natural rate of: 732 *d*.
Mathematical Meth.: G. Ceva on, 252 *cd*; A. A. Cournot, 445 *b*, 861 *c*; Curves, 861 *cd*; Diagrams, 574 *a*-576 *b*; A. J. E. Dupuit, 654 *cd*; and Monopoly, 445 *d*; M. E. L. Walras, 543 *d*.
Maurice, J. F. D.: on Christian Socialism, 280 *ab*, 735 *a*; Competition, 280 *b*; Co-operation, 280 *b*.
Mees, W. C.: on Bimetallism, 657 *d*; follower of D. Ricardo, in abstract meth., 657 *c*.
Menger, C.: on Capital and Interest, 816 *d*; Classical Sch. opposed by, 814 *d*; on free Goods and economic Goods, 815 *ab*; law of prices for Barter, 816 *b*; theory of Value, 816 *bc*.
Mercantile Agent, or Factor: 346 *d*.
Mercantile or Commercial Law: Code Napoléon, 347 *b*; Eng., 346 *d*; Fr., 318 *ab*; Problems affecting, 300 *a*.
Mercantile Syst., or Commercial Syst.: Balance of Trade, 84 *d*, 352 *c*, 724 *c*; undermined by development of Banking, 729 *a*; D. Black, 151 *c*; J. Bornitz, 168 *c*; Bounties and Drawbacks, 353 *ab*; old Colonial syst., 353 *c*; Colonial trade, 350 *d*, 353 *c*; Commercial treaties, 353 *b*, 354 *b*; C. Davenant, 87 *d*, 483 *d*, 729 *d*; G. B. De Luca, 539 *c*; discouragement of Exports, Duties on, 795 *c*; Fallacies affecting, 724 *d*; S. Fortrey, 731 *a*; Hist. of, 344 *b*; D. Hume on, 733 *c*; and Imports of raw material and instruments, 353 *d*; J. Locke, 728 *b*, 729 *a*; theory of Money, 85 *ab*, 352 *ab*, 724 *cd*; T. Mun, 723 *acd*, 724 *ac*, 725 *c*, 726 *c*, 727 *ad*, 729 *c*, 730 *cd*; Objects of Merc. Syst., 352 *a*, 353 *b*, 724 *a*, 725 *ac*; infl. of scarcity of Precious metals, 85 *ab*; Protn., 158 *c*, 344 *d*, 345 *b*; and Protestantism, 285 *ad*, 286 *ab*; A. Smith on, 351 *d*-353 *c*, 733 *d*; Sir J. Steuart, 733 *d*; and progress of Trade, 345 *c*.
Merchant Adventurers' Co.: 16 *c*, 329 *d*, 343 *b*, 344 *b*, 374 *cd*, 727 *a*; and Hanseatic League, 17 *bcd*, 343 *b*; and Staple syst., 16 *d*, 17 *a*, 725 *d*; and treaty of Utrecht, 1474, 17 *bc*; J. Wheeler on, 722 *d*.
Merchant or Trading Companies: compd. with industrial Gilds, 373 *d*, 429 *b*; Hist. of, 373 *d*, 728 *a*; Regulated and jnt.-stk., 18 *b*, 722 *d*, 723 *a*.
Merchants: Alien, medvl., and *Charta Mercatoria* of 1303, 342 *a*; protected by *Magna Charta*, 341 *d*, 354 *b*.
Middleman, and Absentee: 3 *d*.
Mill, James: on Débouchés, 503 *b*; on Exchange, 759 *b*.
Mill, J. S.: on Absentee, 3 *bc*; Abstract meth., 5 *b*, 734 *d*; infl. on American Sch., 807 *d*; A priori meth., 383 *b*; on Capital, 220 *d*; Combination and wages, 336 *b*; Comfort, stan. of, 338 *b*; defence of Communism, 367 *b*; on Competition, 378 *b*; compd. with A. Comte, 383 *ab*; infl. of A. Comte on, 382 *d*; Cost of Prodn., and value, 437 *ab*; Curr., 472 *b*; Death Duties, 490 *cd*; Débouchés, 503 *b*; Deductive Meth., 524 *d*; on Demand, measure of, J. E. Cairnes' crit. of, 540 *b*; on Deprec. of monetary stan., 562 *a*, 563 *a*; Diffic. of attainment, 580 *ab*; law of Dimin. returns, 585 *d*; def. of Direct Taxation, 586 *d*; on Discriminating or Differential Duties, 592 *a*; Distance in time, 593 *b*; Distr., 603 *a*; on Doctrinaire, 624 *b*; Elasticity of Demand, 691 *c*; Emigration, 697 *d*; Equalisation of International Demand, 748 *a*; Exchange, 759 *c*, 760 *c*-761 *b*; Gov., 194 *c*; and

Historical Meth., 735 *a*; International Trade, 604 *a*; W. S. Jevons' crit. of, 735 *b*; Laissez-faire, 194 *c*; Productive Labour, 358 *a*; Rapidity of circ. of Money, 685 *c*; Taxation, 15 *c*; Value, measure of, 562 *d*; Value in use and exchange, 393 *d*, 763 *c*; Wage fund theory, 809 *b*.

Mines, Children's Employment in, 835 *d*, 836 *a*.

Mint: Assay, 60 *d*; Betterness, 138 *d*; Billon, 146 *a*; Brassage, 176 *c*.——Mint, Coinage, charges for, 176 *c*.——Mint, Seignorage, Gold, Hist. of, 176 *c*.

Mir: 22 *d*, 39 *b*, 360 *c*, 361 *a*, 413 *b*.

Mirabeau, V. R., Marquis de, articles in Ephémérides: 744 *b*, 745 *c*; infl. on American Sch., 805 *b*.

Misselden, E., on decay of Eng. Trade: 723 *b*, 730 *d*.

Mississippi Co. scheme, J. Law's: 182 *d*.

Monetary Syst.: of Charlemagne, 499 *b*.

Money: Agio or Premium on, 22 *b*; Aristotle on, 54 *d*, 765 *b*; N. Barbon on, 119 *d*, 121 *a*, 728 *d*; Barrenness of, and canon law of int., 212 *b*, 720 *d*; dist. fr. Cash, 230 *c*; Circ. of, rel. to econ. phenomena, J. G. Büsch on, 196 *a*; as stan. of Deferred payments, 532 *d*; D. Defoe on, in *Robinson Crusoe*, 535 *c*; as Denominator, common, of value, 549 *ab*; necessity of Divisibility, 608 *a*; Claude Dupin on, 652 *c*; H. Grotius on, 656 *b*; International, medvl. bezant, 139 *a*; based on Land, J. Asgill on, 60 *c*; as Measure of Value, disadv. of term, 549 *b*; Medvl. importance of, 85 *a*; Medvl. view of, 721 *d*; common Medium of Exchange, 721 *d*; view of Merc. Syst., 85 *ab*, 352 *ab*, 724 *cd*; Non-metallic substances used as, 450 *c*; Universal, W. Bagehot on, 81 *bc*.——Money of Account, Bank money, 90 *d*, 103 *d*, 104 *d*, 105 *a*, 106 *ac*; Chinese Candareen, 210 *c*.——Money as Commodity, S. Clement on, 313 *a*.——Money, Conventional char. of, Aristotle on, 54 *cd*; N. Barbon on, 121 *a*; G. Berkeley, 135 *a*.——Efficiency of Money, as denoting Amount of pecuniary transactions, 685 *d*; and circ. of Credit instr., 685 *c*; and Quant. theory, 685 *b*; Variations in, 685 *c*.——Money, Functions of, 84 *d*, 122 *a*; Aristotle on, 55 *b*, 765 *b*; in International Trade, 604 *a*.——Inconv. curr., E. P. Eliot on, 692 *cd*.——Money, Legal tender, and Bimetallism, 147 *d*.——Money Market, W. Bagehot on, 81 *ab*.——Quant. theory of Money, 84 *c*; attacked by F. Wieser, 816 *c*.——Rapidity of circ. of Money, J. S. Mill on, 685 *c*; W. Roscher on, 685 *b*.——Money, Value of, G. Ceva on fluctuations in, 252 *c*; extrinsic, intrinsic, and commercial, D. Diodati on, 586 *b*; F. Wieser on, 816 *c*.

Monometallism: compd. with Bimetallism, 146 *d*; Silver, J. Locke on, 146 *d*.

Monopoly: Aristotle on, 55 *c*; medvl. Banalités, 99 *d*; Concession, 384 *d*; Fr. Copper syndicate, 427 *b*, 488 *d*; Copyright, 487 *c*; A. A. Cournot on, where advantageous to public, and mathematical meth., 445 *d*; P. de la Court on, 447 *b*, 657 *a*; Mines and saltworks, 488 *a*; Natural, 487 *c*; One-sided, exchange, value in, under, 760 *b*; Opium trade, 487 *d*; Eng. Salt union, 488 *d*; Dutch Spice trade, 488 *a*; State, as source of revenue, 488 *b*; Two-sided, exchange, value in, under, 759 *d*.——Monopolies, U.S.A., capitalists' Trusts, Stan. Oil Co., 488 *b*.

Montesquieu, C. de S., Baron de: on Consumption, taxes on, 395 *d*; T. Jefferson and, 805 *c*.

Monts de Piété, Italy: 213 *d*.

More, Sir T., in *Utopia*: on treatment of Criminals, 362 *d*; Hours of Labour, 362 *d*.

Mortgage: Mortgage Banks, 107 *a*; Mortgage Loans, rate raised during Great War, 455 *a*; Mortgages, assets of Building Societies, 831 *ab*; converted into terms of years absolute, 422 *c*.

Mosse, M., on Int. compd. with Usury: 479 *d*.

Mun, T.: on exportation of Bullion, 723 *acd*, 730 *c*; Self-Int., 724 *a*; Usury, 725 *c*.

Municipality: rel. to Central gov., 295 *cd*, 296 *bcd*; Powers of, 427 *cd*.——Municipality, Medvl., struggle with Feudalism, 292 *cd*.

Muscovy or Russia Co.: 18 *ab*, 271 *b*, 330 *a*, 375 *c*.

National Debt: Conversion of, 830 *a*, 854 *c*-855 *c*; Debt services, 1916-1923, 828 *cd*, 829 *abc*, 830 *ab*.

Nationality: Conflict of Laws and, 387 *bcd*; Domicil and, 631 *d*-632 *a*.——Nationality, British, and Status of Aliens Act, 1914, 32 *a*.

Natural Agents: dist. fr. Capital, 21 *bc*, 219 *bc*; Property in, 47 *bc*.

Naturalisation, Domicil and: 631 *d*.

Navigation, Inland: J. Brindley, 179 *c*; Canals, 208 *d*, 320 *a*, 833 *d*-834 *b*.

Navigation Laws: R. Coke on, 318 *d*, 727 *b*; against Dutch, 17th centy., 344 *c*, 727 *ab*; Medvl., 342 *d*; Commercial effects on Brit. Colonies, 743 *bc*; on Dutch carrying trade, 229 *bc*, 344 *bc*, 727 *bc*, 743 *ab*; and Enumerated Commodities, Colonial trade, 743 *bc*; Eur. trade, 743 *ab*.

Neutrality: and Decl. of London, 863 *bc*, 864 *a*; and Decl. of Paris, 520 *bc*; Domicil and, 631 *d*-632 *a*.——Neutrality, Armed, 57 *cd*.

New Eng. Co.: 330 *a*.

Newcomb, S.: financial and economic works of, 808 *c*.

Newman, S. P.: work of, 806 *c*.

Newton, Sir I., views represented by J. Conduitt: 387 *a*.

Niger Co.: 19 *d*, 20 *b*, 332 *b*.

North Borneo Co.: 271 *a*, 332 *b*.

North, Sir D., on Balance of Trade: 87 *bc*.

Observation: and Deductive Meth., 523 *b*; compd. with Experiment, 791 *d*; useful if assisted by Hypothesis, 791 *c*.

Opium monopoly: Hist., 487 *d*.

Optimism: F. Bastiat, 124 *ac*; H. C. Carey, 38 *a*, 804 *b*; C. B. di Cavour, 237 *d*; J. Droz, 641 *d*.

Orders in Council: Eng. retaliation for Continental syst., 397 *bc*; and Licenses, 397 *d*.

Ordnance Survey: 200 *a*.

Orthodox Sch. : infl. on commercial politics in Eng., W. ATKINSON on, 66 *c*.
Over-prodn., and **Abundance** : 6 *a*.
Overseas **Trade**, Dept. of : Advisory Committee, 848 *b* ; **Consular Reports**, 846 *d*, 853 *abcd* ; Form "K," 847 *d* ; information service, 847 *abcd* ; organisation, representatives, etc., 846 *b*-847 *a* ; "Special Register" service, 847 *cd* ; Trade fairs, etc., 848 *ab*.
OWEN, R. : his opinions held by C. and J. F. BRAY, 177 *ab* ; and **Co-operation** in Eng., 365 *b* ; **Labour Exchange**, 365 *c* ; colony of New Harmony, 365 *ab* ; administration of New Lanark, 364 *c* ; scheme of **Poor** relief, 364 *cd*.

Panama **Canal** : 208 *d*, 458 *c*, 849 *b*, 850 *cd*, 851 *c*.
Panic : and Bank of England, 463 *ab* ; Causes, 463 *a* ; Effects, 465 *a* ; of 1847, 459 *a*-461 *d* ; of 1857, 1866, 1890, 462 *a*-466 *a*.
PARE, W. : on **Co-operative farming**, Ralahine syst., 413 *c*.
Partnership : **Agency, law of**, 21 *a* ; **Commandite**, 338 *d* ; compd. with **Co.**, 335 *c*, 368 *ab*, 369 *cd*, 428 *b* ; compd. with **Corporation**, 428 *b* ; **Industrial**, and **profit-sharing**, 416 *a*, 419 *d*.
PATERSON, W., and **Darien Co.** : 481 *abc*.
Patten, S. N. : 810 *a*.
Pauperism : **Boarding-out syst.** for pauper children, 159 *d* ; E. DUCPETIAUX on, 645 *b*.
Peasants' Revolt, Causes and area : 28 *c*.
PEEL, Sir R. : Bank Act of 1844, 113 *d*, 459 *a*, 472 *cd* ; repeal of **Corn Laws**, 42 *d*.
Pensions : **Civil List**, 301 *c*.——**Pensions, Old Age**, C. BOOTH'S scheme, 826 *d* ; E. CABET, 198 *c*.
PERCEVAL, S., and Eng. **Finances** during Napoleonic wars, 457 *ab*.
Perry, A. L. : infl. of C. BASTIAT on, 808 *a*.
PETTY, Sir W. : on **Arith., political**, 55 *d*-56 *b*, 731 *bc* ; **Currency** policy of, 804 *d* ; rel. to J. GRAUNT, 731 *c*.
Physiocrats : on **Abundance**, 6 *a* ; **Advances**, 16 *a* ; **Arith., political**, 56 *d* ; infl. of R. CANTILLON on, 215 *a* ; E. DAIRE on, 477 *d* ; D. DIDEROT on, 577 *cd*, 745 *a* ; on **Distr.**, 595 *bc* ; and P. S. DUPONT, 652 *d* ; or **Economistes**, 679 *ab* ; their conception of **P. E.**, 678 *b* ; J. A. SCHLETTWEIN a follower of, 431 *d* ; A. SMITH on, 27 *c* ; **Value** in use and exchange, 762 *d*, 763 *a* ; theory of **Wealth**, 27 *c*.
Pigou, A. C., use of **Curves** by : 861 *d*.
Plantation syst. of Colonisation : 277 *c*, 321 *d*.
PLATO, on **Communism**, *Republic* : 362 *c*.
Political Economy : **Agricultural syst.**, A. SMITH on, 27 *c* ; T. CARLYLE on, 132 *cd*, 227 *c* ; T. CHALMERS on, 255 *bc* ; H. CONRING on, 388 *b* ; Experiment in, 791 *d* ; old name for sci. of **Finances**, 678 *a* ; as art of Gov., early view, 678 *a* ; **Physiocrats'** conception of, 678 *b* ; A. SMITH on, 678 *bc* ; J. TUCKER on, 732 *d*.——**Art of P.E.**, or **Applied Econ.**, 44 *a*.——**Ethics** and, in department of **Distr.**, 596 *cd*.——**P.E. and Curr.**, J. LAW and syst. of **credit**, 452 *c*, 732 *a*.——**Precious metals**, infl. of scarcity : on Medvl. econ., 85 *a* ; on **Merc. Syst.**, 85 *ab*.——**P.E. and Ethics**, 597 *a*, 799 *a*, 800 *a*, 859 *d*.——**Logic and P.E.**, J. E. CAIRNES, 202 *a*, 525 *c*.——**Science of P.E.**, ARISTOTLE'S conception of, 53 *d*, 279 *d*, 280 *a* ; regarded by W. BAGEHOT as applicable only to advanced societies, 79 *d*, 80 *abd*, 735 *b* ; conn. with Ethics, 597 *a*, 799 *a*, 800 *a*, 859 *d* ; sci. of **Exchanges**, R. WHATELY and H. D. Macleod on, 233 *c*, 735 *b* ; **Mathematical Meth.**, 861 *cd* ; Non-moral sci., P. E. DOVE on, 636 *b*.——Diffic. of : fr. Complexity of subject, 304 *c* ; fr. want of precise Nomenclature, 304 *c*.——Sci. of **Wealth**, A. SMITH on, 678 *bc*.——**P.E.**, Sci. and **Art** of, J. BENTHAM on, 131 *d* ; compd., 58 *d*-59 *b* ; Dist., 678 *d*.
Poll-Taxes : Eng., 223 *d* ; Fr., **capitation**, 223 *b* ; **Graduated**, 224 *b* ; A. SMITH on, 224 *a* ; Spain, 485 *a*.
Pool : 335 *d*.
Poor Law : T. ALCOCK on, 31 *a* ; W. P. ALISON on, 32 *bc* ; **Allowance syst.** of 1796, effects on **labour, rent**, and **wages**, 33 *cd* ; J. BENTHAM on, 131 *c* ; Eng., Sir E. CHADWICK on, 253 *b* ; rel. to **Charity**, 267 *cd*, 594 *ab* ; R. DUNNING on, 650 *c* ; Sir F. M. EDEN on, 277 *c*, 679 *cd* ; movement for Reform in, 736 *b*.——**Poor Law Hist.**, Act of 1834, effects, 11 *d*, 13 *a*.
Poor Relief : J. CALVIN'S syst., 205 *b* ; T. CHALMERS' syst., 255 *b* ; Sir J. CHILD on, 277 *c*, 679 *d* ; Diffic. of, 265 *b*, 268 *ab* ; **Divis. of Labour** appl. to, 266 *d* ; and **Encyclical** of Pope Leo XIII., 712 *d* ; Fr. syst., 267 *d* ; Ger. syst., 268 *a* ; small quant. of **Land** let out as substitute for, T. ESTCOURT on, 755 *b* ; power of **Local** authorities, 251 *b* ; Organisation, necessity of, 266 *d* ; R. OWEN'S scheme, 364 *cd* ; Princ. of, 265 *d*-266 *c*, 594 *bc* ; effects on **Wages**, 265 *c*.
Population : **American Sch.** and, 805 *a*, 807 *bc* ; Anc. and mod. times, D. HUME on, 732 *c*, 733 *c* ; study of, as department of econ., **Arith., political**, 56 *bd* ; J. BENTHAM on, 132 *a* ; G. BERKELEY on, 135 *b* ; **Birth-rate**, 823 *c*, 834 *c* ; G. BOTERO on, 169 *d* ; R. CANTILLON on, 215 *b* ; **Census**, 834 *bcd* ; **Checks on**, T. R. MALTHUS' view of, 273 *bc* ; Diminution, causes of, W. BELL on, 129 *b* ; Law of, T. DOUBLEDAY on, 634 *b* ; T. R. MALTHUS' doctr. of, 57 *b*, 242 *c*, 481 *d*, 658 *b*, 734 *a*, 757 *b* ; **Rent** and, U.S.A., 807 *b*.——**Population**, Movement of, 56 *d*, 57 *a*, 240 *a*, 241 *c*, 246 *a* ; and **Birth-rate**, 150 *d*, 823 *c*, 834 *c* ; and **Comfort, stan. of**, 337 *bd*, 338 *a* ; and **Death-rate**, 498 *b*.——**Population**, Reproduction and self-preservation, H. C. CAREY on, 226 *b*.
POSITIVISM, A. COMTE'S crit. of Deductive economists : 383 *a*.
Post Office : increase of postal rates, 829 *acd* ; **Savings banks**, 111 *bc*.
Poverty : D. DIDEROT on, 578 *d*.——**Poverty**, Policy of State, provision of means of Escape, 594 *bc*.
Precious Metals : effects of Influx, 16th centy., 86 *b*, 344 *a* ; Scarcity, medvl., infl. of, 85 *a*.——**Distr. of the Precious Metals**, Agencies affecting, 605 *d* ; and improved **Banking** facilities, 604 *d* ; Course of, 605 *c* ; and

Prices, 604 *b*; D. RICARDO on, 604 *ab*; Statistics, 604 *d*-605 *b*.
Preference, Imperial, 830 *d*, 845 *b*, 862 *b*.
Premium, Agio in Curr.: 22 *b*.
PRICE, B., on herring Brands: 176 *a*.
Price: and Cost of Prodn., 394 *c*, 434 *cd*, 437 *d*; A. A. COURNOT on variations in, 446 *bc*, 861 *c*; illustr. by Curves, 445 *b*, 574 *b*, 575 *cd*, 861 *d*; and Demand, 541 *bcd*; and deficient Harvest, C. DAVENANT on, 484 *c*.—Fair Price, or Justum Pretium, St. ANTONINUS on, 43 *a*; St. Thomas AQUINAS on, 49 *a*; Schoolmen on, 720 *c*.
Prices: and Bimetallism, 149 *b*; effects of Bounties, 174 *ab*, 425 *cd*; E. BURKE on causes affecting, 195 *a*; and Competition, S. CLEMENT on, 313 *a*; of Corn and other commodities, W. FLEETWOOD on, 731 *d*; infl. of Credit, 452 *d*; effect of abundant Curr., 16th centy., 86 *b*; Curves for, 861 *d*; and Custom, 477 *a*; and Distr. of precious metals, 604 *b*; and Equilibrium of supply and demand, 749 *c*; in Gold, fall in since 1872, 339 *bc*; and Gold discoveries of 16th centy., 344 *a*; of Secs., effect of international sales, 50 *b*.—Prices, High, T. ATTWOOD'S theory, 67 *b*; C. BOSANQUET on causes of, 18th centy., 169 *b*; Forestallers and regrators, 489 *b*.—Prices, Hist. of, and Corn rents, 426 *c*; and Manorial accounts, 447 *d*.—Prices, Law of, for Barter, 816 *b*; for monetary transactions, F. Wieser on, 816 *b*.—Prices, Rise of, D. GRASWINCKEL on, 656 *cd*.—Prices, Gov. reguln. of, Assize of Bread and Beer, 64 *b*; Assize of Weights and Measures, 64 *d*.
Privateering and Decl. of Paris: 520 *cd*-521 *a*.
Probabilities: M. C. de CONDORCET on, 387 *a*; A. DEMOIVRE on, 545 *c*.
Production: Agricultural, causes of decrease in, 50 *a*; I. BUTT on, 832 *d*; grades of, Consumers' goods, 392 *a*; Exchange as part of, 451 *d*; State interference with, 172 *c*.—Agents of Prodn., Capital, 21 *c*, 218 *a*; Labour, 21 *bc*; Land, 21 *bc*; Limited, and rent and wages, 21 *d*; Natural agents, 21 *bc*, 219 *bc*.—Prodn., Census of, 834 *d*-835 *b*.—Prodn. and Consumption, rel. between, 393 *c*, 394 *abc*.—Prodn., Cost of, theory of Value, C. F. COTTERILL on, 856 *d*.—Prodn., Instruments of, Appropriation of, 47 *bc*; Capital, I. BUTT on, 833 *a*; Goods of 1st, 2nd, and 3rd order, 380 *ab*, 392 *a*, 393 *b*, 815 *cd*.
Profit: Apportionment of, 221 *d*, 222 *d*; J. E. CAIRNES on theory of, 202 *d*; as an appreciation of capital stock, 222 *b*; rel. to Competition, 601 *b*; T. DE QUINCEY on rate of, 569 *c*; and Earnings of Management, 667 *cd*; compd. with Rent, 705 *a*; D. RICARDO on, D. BUCHANAN'S crit. of, 184 *a*; F. A. WALKER on, 439 *b*, 705 *a*, 735 *c*, 809 *bc*.
Profit-Sharing: Arguments for and against, 412 *ab*, 856 *a*; Hist. in Eng., 412 *b*, 855 *cd*; and Industrial Partnership, 416 *a*, 419 *d*.
Promissory Note, compd. with Bill: 145 *a*.
Property: St. Thomas AQUINAS on, 48 *b*; ARISTOTLE'S defence of, 55 *c*; J. P. BRISSOT DE WARVILLE on, as theft, 180 *a*; J. CALVIN'S defence of, 204 *d*; Canon Law on, 212 *a*; form of Conveyance, 408 *a*; M. DELFICO on, absolute, 538 *a*; Descent of, Sir H. MAINE on, 570 *d*; D. DIDEROT on, 578 *d*, 579 *a*; Eng. law, 14 *d*, 15 *b*, 299 *c*, 422 *bc*; H. GROTIUS on, 285 *d*; "Magic of," econ. effects, 55 *c*; married woman's, 588 *cd*; in Natural agents, 47 *bc*; Origin of, 47 *b*; Prot. defence of, 285 *cd*; Roman law of, 297 *d*.—Property, landed, Law of, Act, 1922, 14 *d*, 15 *b*, 422 *bc*.—Property, Private, capture of, at sea, 521 *bc*; and Distributive justice, 606 *b*.
Protection: C. B. di CAVOUR on, 235 *d*-237 *a*; in Brit. Colonies, 323 *b*, 325 *abc*; Colonial Preference, J. DAVIDSON on, 862 *b*; W. CUNNINGHAM and, 858 *c*; G. B. de LUCA on, 539 *c*; Claude DUPIN on, 652 *b*; 15 centy., 343 *c*; F. LIST on, 171 *b*; rel. to Socialism, 236 *d*, 237 *a*; F. Wieser defends, 817 *b*.—Protn. Econ. effects, Eng., 236 *c*; differing in agriculture and Industry, 236 *ab*.—Protn. and Merc. Syst., 158 *c*, 344 *d*, 345 *b*.—Protn., Temporary, defence of, 172 *c*.—Protn. in U.S.A.: American Sch. on, 804 *b*, 805 *d*, 806 *d*, 807 *cd*; E. B. BIGELOW on, 140 *b*; F. BOWEN on, 175 *a*; H. C. CAREY on, 38 *a*, 226 *bc*, 804 *b*, 807 *cd*; M. CAREY on, 806 *d*; H. CLAY on, 37 *d*, 38 *a*, 305 *a*; A. HAMILTON and, 805 *d*.
Protestantism: and Historical Sch., 286 *b*; and Humanism, 286 *d*; Individualism, 285 *abc*; Laissez-faire, 285 *ad*; Merc. Syst., 285 *ad*, 286 *ab*; P.E. and Ethics, 286 *bcd*; Property, 285 *cd*.
Province syst. of Colonisation: 321 *cd*.

Queen Anne's Bounty: Employment of, 40 *c*.
QUESNAY, F.: articles in Ephémérides, 744 *b*; infl. on American Sch., 805 *b*.

RAE, J.: on Accumulation, effective desire of, 592 *cd*; on Capital and Protection, 807 *b*; opposes A. SMITH, 807 *b*.
RAIFFEISEN, F. W.: syst. of Land banks, 106 *d*.
Railways: African, 849 *cd*; Eng., amalgamation of, 621 *a*; European, 849 *d*-850 *b*; Siberian, 849 *c*; Railways, gauge of, 850 *b*.—Railways, ownership of Docks by, 867 *c*.—Railways, Speculation in, and Crises, 1836, 466 *d*; 1847, 459 *b*-460 *b*, 467 *a*.—Railways, U.S.A., accounting, statistical work of, H. C. ADAMS, 799 *d*, 800 *b*.
RAPP, G., founder of sect of Economites: 366 *d*.
Rates: County, 444 *c*.
Raymond, D.: 806 *d*-807 *a*.
Reciprocity: H. CLAY on, 305 *b*; and Commercial treaties, 354 *b*, 355 *a*.
Registration: Documents, Fr., Enregistrement, 737 *b*; Land, 199 *d*, 200 *a*; Property, 199 *d*.
Relativity: W. BAGEHOT'S application of, 80 *d*; principle of, and Historical Meth., 573 *a*; J. S. MILL on, 735 *a*.
Rent: American Sch., theory of, 804 *b*, 807 *bc*; J. ANDERSON'S theory, 39 *d*, 734 *b*; Anti-rent agitations, 42 *d*, 43 *a*; Austrian Sch., theory of, 816 *d*; S. BAILEY'S theory, 82 *d*; N. BARBON on, 119 *b*; and Cost of prodn.,

438 *cd* ; T. De Quincey on, 569 *d* ; and law of Dimin. returns, 585 *b* ; rel. to Distr., 602 *a* ; R. Jones on, 734 *c* ; Rent, Labour, medvl., 28 *c*, 152 *b*, 261 *a*, 407 *a* ; rel. of Landlord and Tenant, 742 *c* ; T. R. Malthus on, 734 *b* ; compd. with Profit, 705 *a* ; D. Ricardo's doctr. of, 21 *d*, 184 *ab*, 226 *a*, 734 *b*, 816 *d*.——Rent of Ability, 22 *a*.——Consumer's Rent, illustr. by Curves, 575 *b* ; A. Marshall on, 392 *b*.——Rent, Taxation on, K. Arnd on, 58 *a* ; T. Chalmers on, 256 *a*.

Reproduction, Cost of, M. Agazzini on : 20 *d*.

Revolution, French : Curr. experiments, Assignat, 62 *d*, 206 *cd* ; distr. of Land, 363 *cd*.

Ricardo, D. : on Advances, 16 *b* ; American Sch. and, 804 *b*, 807 *bc* ; A priori meth. of reasoning, 47 *d* ; rel. to J. Bentham, 133 *b* ; on Bounties, 171 *b* ; crit. by H. C. Carey, 226 *a*, 807 *c* ; on Comfort, stan. of, and socialist view, 338 *ab* ; on Competition, 378 *b* ; on Countervailing duty, and price due to taxation, 443 *d* ; J. Craig on economic tenets of, 857 *d* ; on Curr., 472 *b* ; Definitions, 534 *bc* ; on Deprec. of monetary stan., 562 *b* ; on Diffic. of attainment, 580 *c*, 582 *a* ; on law of Dimin. returns, 585 *c* ; on Distr., 596 *a*, 603 *a* ; on Distr. of precious metals, 603 *d*-604 *b* ; definitions, illustn. of Doctrinaire, 623 *d* ; use of Examples, 753 *bc* ; infl. in Ger., 126 *a* ; R. Jones' crit. of, 734 *c* ; J. R. M'Culloch on, 734 *c* ; on Profit, D. Buchanan's crit. of, 184 *a* ; on Taxation, 396 *a* ; on Bullion Committee, 192 *a* ; as measure of Value, 562 *d*.——*Principles*, translated into Ger. by E. Baumstark, 125 *d*, 126 *a*.——Theory of Rent, 21 *d*, 734 *bc* ; D. Buchanan's crit. of, 184 *ab* ; H. C. Carey's crit. of, 226 *a*, 807 *c* ; F. Wieser's criticism of, 816 *d*.——On Value, defended by T. De Quincey, 568 *b* ; A. L. C. Destutt de Tracy's theory, 572 *bc* ; in Use and exchange, 763 *b*.

Rodbertus, K. J. : on "Iron law" of wages, 337 *d*.

Rogers, J. E. T. : on Econ. Hist., 735 *a*, 859 *a*.

Roman Catholic Sch. : Encyclical of Pope Leo XIII., 284 *c*, 712 *b* ; Devas, C.S., 864 *b* ; P. G. F. le Play, 284 *c* ; and Socialism, 283 *cd*, 284 *cd*.

Roman Law : or Civil Law, dist. fr. Canon Law, 297 *b* ; of Contract, 298 *b* ; Debt, 391 *b* ; effect of Empire on, 297 *cd* ; Inher., 130 *d*, 164 *c*, 790 *a* ; Int., 39 *c* ; Jus gentium, 297 *c* ; codification under Justinian, 297 *d* ; Mod. countries, 299 *a* ; Origin, 297 *b* ; of Property, 297 *d* ; Sale, 708 *a* ; XII. Tables, 297 *b*.

Roscher, W : on Rapidity of circ. of Money, 685 *b*.

Rousseau, J. J. : refuted by F. Briganti, 179 *a*.

Royal African Co. : 19 *a*, 330 *bc*.

Rupee : closing of Ind. Mints, 776 *d*-777 *b* ; enfaced Paper, 715 *b*.

Russia or Muscovy Co. : 18 *ab*, 271 *b*, 330 *a*, 375 *c*.

Sale of Goods : general rule Caveat emptor, 176 *b*, 234 *d* ; Sale in Roman Law, 708 *a*.

Salmasius, C., on Int. and usury : 136 *a*, 656 *d*.

Salt Union, Eng : 488 *d*.

Saving : and Distance in time, 593 *ab* ; in Ger., 109 *b* ; Opportunities for, and Thrift, 7 *c*.

Savings Banks : Banks, popular, Ger. and Italy, 109 *a*-110 *c* ; in Colonies, 111 *d*, 819 *b* ; P. Colquhoun on, 334 *d* ; founded by H. Duncan, 649 *bcd* ; Fr., 111 *d* ; Investment of deposits, 560 *a* ; Post-office, 111 *bc* ; U.K., 110 *c*-111 *b*.

Say, J. B. : on Bounties, 171 *c* ; theory of Débouchés, 503 *ab* ; on Distr., 595 *d* ; on Value in use and exchange, 763 *d*.

Schlettwein, J. A., follower of Physiocrats : 431 *d*.

Schoolmen : and Econ. thought, 48 *a* ; on Justum Pretium, 49 *a*, 720 *c*.

Schulze-Delitzsch, F. H. : and Banking, co-operative, 109 *abc*, 412 *d*.

Securities : Arbitrage, 50 *c* ; Bearer, 127 *b* ; Blank transfer, 155 *c* ; Certificate, share, 251 *d*, 346 *c* ; Coupon, 444 *d* ; Debenture, 346 *b*, 501 *a* ; Enfaced paper or Rupee paper, 715 *ab* ; Exchequer Bond, 785 *bc* ; Lloyd's Bonds, 163 *c* ; Prices of, effect of international sales on, 50 *b*.

Self-interest : and Altruism, 37 *b* ; C. B. Beccaria on, 128 *a* ; and Competition, 377 *b*, 379 *ab* ; D. Defoe on, 729 *ab* ; Helvetius on, 128 *a* ; T. Mun on, 724 *a* ; or egoism, A. Smith on, 686 *b*.

Seneuil, J. G. Courcelle- : 857 *ab*.

Senior, W. N. : on Absentee, 3 *b*, 4 *b*.

Serfdom : in Agriculture, disadv. of, 716 *b* ; Def. of, 716 *a* ; in Industry, disadv. of, 716 *d* ; Russ., 23 *a*.

Services : F. Bastiat's doctr. of, 124 *b*.

Shipping : Consular Reports, British, information as to, 853 *cd* ; Consuls, duties as to, 854 *abc*.

Sierra Leone Co. : 19 *b*, 330 *b*, 331 *d*.

Silver : effects of Bimetallism on price of, 148 *cd* ; as By-product, 197 *bc* ; and Closing of Ind. mints, results, 776 *d*-777 *b* ; and London Produce clearing, 311 *b* ; as Reserve in banking, 147 *b*.—— Silver, Coinage of, 803 *d*-804 *a* ; Alloy, 803 *d*-804 *a* ; J. Locke on W. Lowndes' proposed amendment of, 1695, 729 *a*, 731 *c* ; Standard of, reduced, 803 *d*-804 *a*.——Silver, Deprec. of, 81 *c*, 147 *b*, 149 *a*, 564 *b*, 771 *d* ; W. Bagehot on, 81 *c*.——Silver, Discoveries of, 16th centy., L. Diodati on, 586 *d*.——Silver Legisl., U.S.A., Bland Act and Dollar, 154 *c*.——Silver, Prodn. of, and Bimetallism, 148 *c*.——Silver as Stan. of value, in Eng., hist. of, 499 *cd*.

Sinking Fund ; or Amortization, 38 *b* ; Annuity, 40 *d* ; and Deprec. of machinery, 561 *d* ; for Brit. Debt to U.S.A., 830 *a*, 855 *bc*.

Sismondi, J. C. L. S. de : on Laissez-faire, 286 *c*.

Sixteenth centy. : Depopulation, 552 *bc*.

Slavery : Abolition of, 19th centy., 2 *a* ; Abolitionist, 1 *d* ; St. Thomas Aquinas on, 48 *d* ; Assiento Treaty, 62 *d* ; Lord Brougham on, 181 *b* ; J. E. Cairnes on, 201 *b*, 202 *b* ; and medvl. Church, 281 *a*-282 *a* ; anc. City based on, 291 *d* ; T. Clarkson on, 1 *d*, 303 *b* ; B. Edwards on, 682 *a* ; Ephémérides and abolition of, 125 *b*, 744 *a* ; Objections to, 694 *c*.——Emancipation of slaves, H. Duncan on,

649 *d*; Effects, 694 *c*-695 *c*; as Religious act, 281 *d*.
Small Holdings and Allotments Acts, 1907, 1908, 800 *c*-801 *d*, 803 *abcd*
Smith, Adam; on Administration, local, 156 *d*; Advances, 16 *b*; American Sch. and, 804 *b*, 805 *abc*, 806 *bc*, 807 *bc*; Balance of trade, 87 *d*-88 *b*; infl. on E. Baumstark, 126 *a*; C. B. Beccaria's anticipation of, 127 *d*; compd. with J. Bentham as philosopher, 132 *d*, 133 *a*; on Bounties, 171 *b*, 173 *b*, 353 *b*; on Cadastral survey, 200 *b*; H. C. Carey and, 807 *c*; Carrying trade, 228 *d*; Colonial empire, 353 *c*; old Colonial syst., 323 *a*, 329 *b*, 331 *c*, 353 *c*; Commercial treaties, 353 *b*; Companies, trading, 16 *b*, 18 *ab*; Competition, 378 *a*; Consumption, 393 *c*; Corn laws, 425 *d*; Corn as measure of value, 562 *d*; Cost of prodn. and value, 434 *d*, 437 *c*, 580 *d*, 763 *ab*; Curr., 472 *b*; Death Duties, 490 *bc*; Debasement of Coin, 563 *b*; Debts, public, or national, 507 *a*; sparing use of Definitions, 534 *b*; on Distr., 595 *cd*, 603 *a*; indebted to W. Douglass, 804 *c*; Drawbacks, 353 *a*, 640 *bc*; Education and Endowments, 264 *a*, 713 *c*; use of Examples, 758 *b*; on Exchange, 759 *b*; approved of Excise scheme of Sir R. Walpole, 789 *a*; conn. with A. Ferguson, 733 *b*; on Finances, 733 *d*; B. Franklin's estimate adopted by, 805 *a*: Free Labour, 815 *b*; Free Trade, Exceptions to, 352 *d*; on Gilds, 430 *b*; A. Hamilton and, 805 *c*; use of Inductive Meth., 734 *a*; infl. of, 734 *a*; on Poll taxes, 224 *a*; J. Rae and, 807 *b*; Revenue, 733 *d*; on Self-int. or egoism, 686 *b*; compd. with Sir J. Steuart, 733 *d*; on Value in use and exchange, 763 *ab*.—A. Smith on Capital, Fixed and floating or circulating, 16 *b*, 220 *cd*.—A. Smith on Labour, Divis. of, 409 *b*, 609 *ab*; Free, 815 *b*; Productive and Unproductive, 358 *a*.—On P.E., Agricultural syst., 27 *c*; Commercial or Merc. syst., 351 *d*-353 *c*, 733 *d*; as sci. of Wealth, 678 *bc*—on Taxation, Capitation, 224 *a*; Indirect, 352 *d*, 395 *d*, 396 *ab*; Maxims of, certainty, convenience, economy, and equality, 251 *d*, 435 *a*, 519 *c*.
Snowden, P., Budget of: 830 *bc*.
Social Contract: J. Althusius on, 36 *c*; D. Hume on, 728 *b*.
Social Sci., or Sociology: term invd. by A. Comte, 383 *a*.
Socialism: Ancient, S. Cognetti on, 840 *b*; J. F. Bray, 177 *bc*; Christian, 280 *a*, 735 *a*; or Collectivism, 320 *cd*; compd. with Communism, 366 *c*, 598 *a*; and Distr., 598 *a*-599 *b*, 606 *b*; and Dutch Sch., 658 *cd*; Encyclical of Pope Leo XIII., 284 *cd*, 712 *c*; and Protn., C. B. di Cavour on, 236 *d*, 237 *a*.—Socialism, Scientific, and International working men's Assoc., 361 *d*; F. Lassalle, 337 *d*; H. K. Marx, 735 *a*, 763 *c*; Wages, "Iron Law" of, 337 *d*.—Socialism, State, J. J. L. Blanc and Ateliers Nationaux, 66 *b*, 154 *b*.
Society: Aristotle on origin of, 55 *abc*; J. F. Bray on jnt.-stk. modification of, 177 *bc*.—Society, Organic view of, rel. to Historical Meth., 675 *d*.
Solidarity: A. Comte on, 383 *a*.
South African Reserve Bank, 820 *bcd*.
South Sea Co.: 182 *bc*, 271 *b*, 330 *b*; and reduction of National Debt, 404 *c*.—S. Sea Bubble, 183 *a*; and J. Aislabie, 30 *c*.
Sovereign: Abrasion of, 2 *c*, 548 *d*.
Spence, T., on Land, nationalisation of: 736 *a*.
Stamp Duties on Bill of Exchange: 143 *d*; increased, 829 *a*.
Standard of value: Alternative, 35 *d*; Appreciation of, 45 *b*.
Staple: 16 *c*, 342 *b*, 721 *c*, 722 *c*, 723 *b*; Advantage of, 13th and 14th centy., 374 *a*; importance of Calais, 16 *c*, 374 *d*, 722 *a*; causes of Decline, 375 *ab*; courts of, and medvl. Law merchant, 374 *b*; defended by G. de Malynes, 723 *bc*; and Merchant Adventurers' Co., 16 *d*, 17 *a*, 375 *ab*, 725 *d*; and Merchants, medvl., 374 *b*; defended by T. Milles, 722 *c*.
State: State Control, E. Burke on princ. of, 195 *b*; and Laissez-faire, J. E. Cairnes on, 194 *c*; Necessity of, 194 *ab*.—State, Econ. functions of, 10 *a*, 14 *a*, 817 *ab*; F. Wieser on, 817 *ab*.—State Interference, Agricultural Holdings, 800 *c*-801 *d*; and Dutch Sch., 658 *c*; Pensions, Old-Age, 826 *d*; Unemployment Insurance, 824 *b*.
Statics, social, and social Dynamics: A. Comte on, 383 *a*.
Stationary State: T. Chalmers on, 256 *c*.
Statistics: G. Achenwall and, 8 *a*; sci. of, and Arith., political, 56 *b*; use of Average, 74 *bc*, 818 *c*-819 *a*; and C. Babbage, 75 *b*; C. Besold on functions of, 135 *d*; T. H. Buckle on, 185 *a*; 17th centy., E. Chamberlayne's *Angliae Notitia*, 256 *d*; use of Chorogram, 279 *c*; use of Chronogram and Hexogram, 287 *b*; and Demography, 545 *ab*; Error, law of, 751 *b*, 883 *bc*; German, E. Engel, 886 *bc*; instruction in, 875 *c*, 879 *bd*, 882 *d*; Physical, F. P. Dufau on, 648 *c*; and theory of Probability, M. C. de Condorcet on, 387 *a*.—Statistics of Industry, 832 *ab*, 835 *ab*; Statistics, Meth. of, use and misuse of Average, 74 *bc*, 818 *c*-819 *a*; use of Curves, 474 *c*, 861 *cd*.—Statistics, Vital, A. Deparcieux on, 549 *d*; W. Farr on, 239 *b*, 497 *d*, 790 *b*; Carlisle tables, J. Heysham and J. Milne on, 242 *c*.
Statutes: Acton Burnell, or Statute of Merchants, 342 *a*; Apprenticeship, 45 *d*-47 *a*, 318 *d*, 430 *a*; Arbitration, 51 *d*; Distr., 603 *cd*; Enclosures, 24 *b*, 711 *d*; of 1463 on Imports, 343 *c*; Labourers, 28 *c*, 552 *b*; Merton, 359 *d*, 710 *a*; Westminster II., 1285, *de donis condicionalibus*, 359 *d*, 710 *a*, 738 *d*; Westminster III., 1290, Quia Emptores, 544 *b*.
Steelyard and Hanseatic League: 17 *bcd*, 373 *d*, 669 *a*.
Stein, H. F. K., Freiherr vom: abolition of restrns. on Occupations, 431 *d*, 432 *a*.
Steuart, Sir J.: on Balance of Trade, 87 *b*; Merc. Syst., 733 *d*; compd. with A. Smith, 733 *d*.

Stock Exchange: Account, 6 *d*; Arbitrage, 50 *b*; Assignee, 64 *a*; Backwardation, 78 *b*, 127 *b*, 396 *c*; Bear, 127 *b*; Bearer (secs.), 127 *b*; Bond, 163 *c*; Broker, 181 *a*; Bull, 190 *d*; Buying in, 196 *d*; Call, 203 *c*; Carrying over, 228 *d*; Cash, sale for, 231 *c*; Cedula, 237 *d*; Change (Agents de), Fr. legisl., 262 *a*; and Clearing syst., 310 *b*, 487 *a*; Consols, 390 *c*; Continuation or Contango, 127 *b*, 396 *c*; Contract note, 402 *d*; Corner, 427 *a*; Cum dividend, 472 *a*; Dealer, 486 *d*; Dearness, 489 *c*; Deferred and preferred stock, 533 *a*, 607 *b*; Delivery, Good, 539 *b*; Discount, 590 *d*, 591 *a*; Discount, *escompte* on Fr. bourse, 590 *c*; Drawing, 640 *d*; Ex. All, 758 *a*; Ex. Dividend, 789 *b*; Ex. Drawing, 789 *b*; Ex. New, 790 *a*; Options, 203 *c*; Put., 203 *c*.——Exchange, Stock, London, Administration, 769 *d*; Foundation, 182 *b*; Hist., 769 *c*; Position, 768 *bc*.——Exchange, Stock, Provincial, Business, 770 *c*; Organisation, 770 *ab*.

Stockbroking, legisl. on, 1696: 182 *b*.

Street Trading, Children's Employment, 836 *b*.

Strikes: and Blackleg, 153 *bc*.——Engineering and Allied Industry, Agreements, avoidance of, 884 *c*-886 *b*.

Sugar: bounties on, 172 *b*, 173 *b*-174 *c*, 827 *cd*; taxation of, R. Auspitz, 814 *c*.

Super-tax, increases in, 828 *ac*-829 *a*.

Supply: Supply and Demand, illustr. by Curves, 540 *d*, 542 *bcd*, 575 *a*, 576 *a*, 861 *cd*; Equilibrium of, 749 *b*, 761 *c*; Interdependence of, 540 *a*; Laws of, 541 *a*.——Supply, Parly., Appropriation Act, 782 *d*, 811 *d*; audit of accounts of money voted in, 72 *ab*; Committee of, 783 *b*; annual, and Consolidated fund, 389 *d*, 782 *ab*; Estimates, 782 *bc*; and Taxation, 783 *b*; Ways and means, committee of, 783 *b*.

Surrey Canal Co.: 612 *c*, 615 *c*.

Survey, cadastral: for Financial purposes, Fr., 200 *b*; Ordnance, 200 *a*; A. Smith on, 200 *b*.

Survival of the fittest: Physical, 481 *d*; Social, 482 *a*.

Suspension of specie payments: Eng., 1797-1819, 92 *b*, 315 *d*; 1914, 868 *d*, 869 *a*; Fr., 1848, 1870, 98 *b*.

Sweating: and Domestic syst. of Industry, 630 *d*.

Swift, J.: Drapier's letters and W. Wood's patent, 639 *d*, 732 *a*.

Syndicate: 335 *d*; Fr. Copper, 427 *b*, 488 *d*.

Synthesis and Synthetic meth.: compd. with Analytical, 38 *cd*.

Tabular Stan.: and Deferred Payments, 532 *d*; W. S. Jevons on, 472 *b*, 532 *d*.

Tally: Dica, 576 *c*; Hist. of, 779 *d*.

Tanistry, inher. by: 178 *c*.

Tare and Tret: 33 *a*.

Tariff Reform Movement (*see* Protection).

Taussig, F. W.: 809 *c*; on American Sch., 804 *b*.

Taxation: Ad valorem duty, 15 *c*, 828 *b*; St. Thomas Aquinas on, 49 *b*; Assessed taxes, 61 *c*; princ. of Assessment, Imperial, 61 *d*, 857 *b*; on Auction sales, 68 *d*; R. Auspitz on, 814 *c*; Bate's case, rights of, claimed by Crown, 125 *a*; J. Bentham on, 132 *a*; and Betterment, 136 *b*-138 *d*; Bounties, negative tax, 172 *cd*, 446 *a*; Brit., reform of, 186 *cd*; A. Broggia on princ. of, 180 *bc*; J. Calvin on, 204 *d*; D. Carafa on, 224 *cd*; Certainty of, 251 *d*; and Chambers of Agriculture, 258 *b*; under Charles I., 168 *a*; W. Cobbett on, 315 *cd*; R. Cobden on, 317 *a*; A. A. Cournot on, 15 *d*, 446 *ab*; Marquis de Dangeul on, 480 *d*; C. Davenant on, 483 *c*, 484 *b*; Death duties, 490 *b*; G. B. de Luca on, 539 *d*; on Bank Deposit, 103 *c*; D. Diderot on, 579 *b*; P. E. Dove on 636 *ab*; under Elizabeth, 168 *a*; History of, S. Dowell on, 867 *c*; on Income, 828 *ac*, 829 *a*; on Int., J. Drake on, 639 *c*; under James I., 168 *a*; Local princ. of assessment, 62 *b*; on Luxury, 18th centy. and mod., 61 *c*; J. S. Mill on, 15 *c*, 586 *d*; state Monopoly as source of revenue, 487 *d*; Queen Anne's Bounty, 40 *c*; Poll taxes or capitation, 223 *b*, 485 *a*; on Rent, T. Chalmers on, 256 *a*; on Bank Reserve, 99 *a*; D. Ricardo on, 396 *a*; Stamp duties, 143 *d*.——Taxation, Budget, 828 *a*-830 *d*.——Taxation, Corvée, Egypt, 433 *d*; Eng., 432 *d*; Fr., 433 *b*.——Direct Taxation, L. H. Courtney on assessment of, 857 *b*; J. R. M'Culloch on, 586 *d*; J. S. Mill's def., 586 *d*; H. Sidgwick on, 587 *a*.——Taxation, Florence, Catasto, 233 *d*; Estimo, 755 *d*.——Taxation, Fr., Aides, cour des, medvl., 30 *b*; C. L. G. d'Audiffret on, 69 *bc*; Capitation, 223 *b*; Champart, 260 *d*; of clergy, Décimes, 581 *b*; N. Desmarets, 571 *c*; of clergy, Don gratuit, 632 *d*; Épices, 747 *d*; and États généraux, 756 *c*; Prestation, 433 *c*.——Graduated or progressive Taxation, Catasto in Florence, 233 *d*.——Indirect Taxation, Arguments for, 395 *d*; Brit., princ. of, 186 *d*; Cost of, 396 *a*, 435 *c*; Incidence of, 396 *b*; J. R. M'Culloch on, 396 *a*; C. de S. de Montesquieu on, 395 *d*; J. S. Nicholson on, 395 *d*; Objections to, 436 *b*; D. Ricardo on, 396 *a*; H. Sidgwick on, 396 *a*; A. Smith on, 352 *d*, 395 *d*, 396 *a*.——Taxation, Maxims of, Sir M. Decker, anticipation of A. Smith, 519 *c*; A. Smith's certainty, convenience, economy, and equality, 251 *d*, 435 *a*, 519 *c*.——Taxation, Medvl., Annates, papal, 40 *bc*; Benevolences, 130 *d*; Butlerage, 196 *c*; Cambage, on ale, 206 *a*; Carucage, 229 *d*; Chevage, 274 *d*; Chiminage, 279 *a*; Church-seed, 287 *b*, 645 *d*; Cornage, 426 *d*; Danegeld, 480 *a*; and Domesday Book, 630 *a*; Ecclesiastical immunities from, 282 *a*; under Edward I., 15 *d*; under Henry VI., 136 *b*; *Parva custuma*, 794 *c*; Prisage and Recta prisa, 647 *d*, 794 *b*; Purveyance, 794 *b*; Scutage, 282 *c*; Testa de Nevill. 552 *ab*: Trinoda necessitas, 282 *b*.——Taxation, Reduction of, *versus* Debt reduction, 830 *b*.——Taxation, Roman, Vicesima haereditatum, 490 *b*.——Taxation, syst. of Single Tax, K. Arnd on, 58 *a*; Dîme Royale, 537 *b*, 583 *a*; Impôt unique, 653 *c*.——Taxation, A. Smith on,

251 *d*, 352 *d*, 395 *d*, 396 *a*, 435 *a*, 519 *c*; **Capitation**, 224 *a*.—**Taxation**, Span., Alcavala, 30 *d*; reformed by Z. de S. y B. ENSENADA, 737 *d*.—**Taxation, Diffusion Theory of**, 582 *b*.

Taxed commodities, storage of: 163 *d*.

Taxes, **Farming of**: D. CARAFA'S defence of, 224 *d*; Objections to, 180 *c*.

Telegraphic transfers: or **Cable transfer**, 199 *cd*; instr. of **Credit**, 442 *d*, 454 *b*.

TEMPLE, Sir W.: on **Merc. Syst.**, 724 *b*.

Tenant: Agricultural, position of, 26 *d*, 376 *ab*, 690 *c*, 800 *c*-801 *d*, 803 *c*; **Compensation** of, for improvements, 376 *abc*, 800 *cd*, 801 *acd*; relation to Landlord, 742 *c*, 800 *c*-801 *d*, 803 *c*.

Textiles: qual. of, and **Conditioning**, 385 *d*; effects of **Cotton Famine** on industry, 440 *d*, 441 *a*.

Theory: compd. with **Facts**, and Hist., 675 *b*-676 *a*.

Thrift: opportunities for Saving, 7 *c*.

Tithes: Hist. of, 645 *d*, 646 *bc*.

TOOKE, T.: **Bullion Committee**, 191 *d*; **Crises**, 456 *abc*, 457 *bcd*, 458 *acd*, 459 *c*, 466 *cd*.

Trade: and **Absentee**, 3 *bc*; St. Thomas AQUINAS on, 49 *a*; ARISTOTLE on, 54 *d*; N. BARBON on, 119 *c*, 120 *b*, 731 *d*; E. BURKE on disadv. of restrns., 195 *b*; **Chapman** and early **retail**, 262 *b*; **Commercial Intelligence**, 845 *d*-848 *b*, 853 *cd*; **Consular Reports**, 391 *c*, 846 *d*, 853 *bcd*; **Depression**, 565 *d*-568 *a*; effects of **Discoveries, geographical**, 591 *bc*; post-Constantinian **Fathers** on, 49 *a*; and the Flag, 324 *d*-325 *d*; and **Industrial Revolution**, 345 *a*; Irish, A. DOBBS on, 611 *b*; and *Magna Carta*, 341 *d*, 354 *b*; under **Merc. Syst.**, 344 *b*-345 *b*; of the World, 1890, 340 *b*.—**Board of Trade**, 158 *b*, 824 *abc*; **Census of Production**, 834 *d*-835 *b*; **Departments** of, 159 *bc*, 824 *abc*.—**Trade**, Overseas, Dept. of, 824 *c*, 846 *a*-848 *b*.—**Trade**, Brit., Anc., 341 *a*; Anglo-Saxon, 341 *a*; Medvl., 341 *c*-343 *c*; Mod., hist. of, 339 *a*-340 *d*; effect of Norman Conquest, 341 *c*; 16th centy., 343 *d*, 344 *a*.—**Carrying Trade**, and Eng., 344 *b*; and **Hanseatic League**, 342 *b*, 349 *a*; Dutch, effect of **Navigation Laws** on, 229 *bc*, 344 *bc*, 727 *bc*, 743 *ab*; A. SMITH on, 288 *d*.—**Coasting Trade, Free Trade** appl. to, 313 *d*; Regulns. of, 314 *a*; **Statistics**, 314 *bc*.—**Trade Disputes, Combination**, 336 *bc*, 390 *d*; **Conseils de Prud'hommes**, 51 *d*, 385 *bc*, 389 *bc*; **Copartnership**, 855 *c*-856 *b*; **Engineering and Allied Industry Agreements**, 884 *c*-886 *b*; Trades Disputes Act, 1906, 337 *a*, 391 *a*.—**Trade, Foreign**, T. CHALMERS on, 255 *d*.—**Trade**, Freedom of, P. de la COURT on, 447 *b*, 657 *b*.—**Trade**, Overseas, Dept. of **Board of Trade**, 824 *c*, 846 *a*-848 *b*.—**Trade** routes, 848 *b*-852 *a*.—**Trade**, State regulns. of, **Brands**, 175 *d*-176 *b*; J. CARY on, 230 *b*.

Trade Unions: and **Apprenticeship**, 45 *d*, 46 *a*, 884 *d*, 885 *b*; **Caste** as, 232 *c*; Collective bargaining, 884 *d*, 885 *ac*; **Employers** and, mutual recognition of rights, 884 *d*, 885 *abc*; W. S. JEVONS on, 760 *a*; Legisl., 19th centy., 336 *d*-337 *a*, 390 *d*-391 *a*; Legisl., 20th centy., 337 *a*, 391 *ab*; **Strikes**, 391 *a*, 884 *c*, 885 *a*, 886 *a*; effect of **combination** on **Wages**, 336 *b*; **Trade Union Act**, 1913, 337 *a*.

Transhipment facilitated, **Bonded Warehouses**: 163 *d*, 475 *d*.

Transport: aeroplane, 852 *a*; **Commercial Routes**, 848 *b*-852 *a*; inland water, 850 *c*; motor, 851 *d*; **railway**, 849 *c*-850 *b*; **Transport**, Ministry of, 824 *b*.

Treasury: **Audit**, 71 *c*-72 *b*; dist. fr. **Exchequer**, 783 *c*; Functions and const., 783 *d*.

Truck and **Barter**, 122 *bc*.

Trust: 335 *d*; Legal, 750 *c*; capitalistic **Monopoly**, U.S.A., Stan. Oil Co., 488 *b*.

Trustee: in **Bankruptcy** cases, 114 *d*, 116 *c*, 117 *a*; **Liab.** of, 177 *d*; in **Savings banks**, 110 *d*.

Tucker, G.: opposes D. RICARDO, 808.

TUCKER, J., on **P.E.**, 732 *d*.

TURGOT, A. R. J.: infl. on **American Sch.**, 805 *bc*; on **Capital**, 217 *d*; Econ. princ. of, 431 *b*; articles in **Ephémérides**, 744 *c*.

Turkey or Barbary or Levant Co.: 18 *a*, 271 *b*, 330 *a*, 343 *d*, 344 *c*, 375 *c*, 669 *c*, 726 *b*, 728 *a*, 729 *b*.

Unemployed: relief of, in Fr., **Ateliers Nationaux**, objections to, 66 *bc*; J. CARY on, 230 *b*; Class, origin of, 707 *d*; Unemployment **Insurance**, 824 *b*.

Usury: Sir T. CULPEPER (elder and younger) on, 470 *cd*, 725 *b*, 730 *d*; **Dry Exchange**, 643 *b*; compd. with **Int.**, M. MOSSE on, 479 *d*; charge against **Merchant Adventurers**, 722 *c*.—**Usury, Triple Contract**, J. ECK, 673 *cd*; J. MAJOR on, 674 *a*.

Utilitarianism: J. BENTHAM'S form of, 131 *c*, 132 *cd*.

Utility: **Degree of**, phrase introd. by W. S. JEVONS, 536 *a*; T. DE QUINCEY on, 568 *d*, 569 *b*, 570 *a*; rel. to **Value**, 393 *d*, 580 *bc*, 764 *b*-766 *c*, 815 *bcd*, 816 *abc*.—**Dimin. Utility**, law of, 523 *d*; and law of **Demand**, 541 *a*.—**Marginal Utility**, compd. with **Total**, and **value**, 73 *b*, 569 *b*, 570 *a*, 815 *bcd*, 816 *abc*; Public **Utility**, 381 *d*.—**Total Utility**, A. J. E.-J. DUPUIT on, 654 *b*, 765 *c*; and **Mechanics** of **Industry**, 581 *b*; and ratio of Satisfaction, graphically illustr., 536 *cd*.

Value: effect of **Abstinence**, 761 *d*; M. AGAZZINI on, and **Cost** of reproduction, 20 *d*; R. AUSPITZ on, 814 *c*; N. BARBON on, 119 *c*-120 *a*, 121 *a*; E. von BÖHM-BAWERK on, 815 *d*, 816 *b*, 826 *a*; **Conventional**, 404 *b*; and **Cost of Prodn.**, 434 *cd*, 437 *ab*, 580 *d*, 760 *d*, 762 *a*-764 *c*; B. DAVANZATI on, 483 *ab*; **Declared and real**, and trade statistics, 521 *d*; **Denominator, common**, of, **money**, 549 *a*; rel. to **Diffic. of attainment**, 569 *a*, 580 *a*, 759 *d*; and **Distance in time**, 592 *cd*; and **Final Utility**, W. S. JEVONS on, 378 *c*, 393 *d*, 766 *b*, 815 *b*; **Marginal** opposed to **Total Utility**, 569 *b*, 570 *a*; D. RICARDO on, 568 *b*, 572 *bc*, 763 *b*.—**Value** in **Exchange**, determined by **Diffic.** and **Utility**, 759 *d*-762 *b*; Hist. of **theory** of, 762 *d*-766 *d*; effect of **Monopoly**,

759 *d*-760 *c*; M. E. L. Walras on, 766 *c*.—**Intrinsic Value**, S. Bailey on, 82 *c*; N. Barbon on, 120 *a*.—**Measure of Value, Bullion**, D. Ricardo, 562 *d*; Corn, A. Smith, 562 *d*; and **Deprec. of monetary stan.**, 562 *c*; **Labour**, T. R. Malthus, 562 *c*; J. S. Mill on, 562 *d*; **Money** as, Aristotle on, 54 *c*.—**Stan. of Value, Alternative**, 35 *d*; **Appreciation** of, 45 *bc*; W. S. Jevons on fluctuations in **value**, 36 *a*, 45 *b*; necessity of **Stability**, 146 *d*.—**Theory of Value**, Aristotle, 54 *c*, 55 *b*, 762 *d*, 765 *b*; M. de Augustinis, 72 *cd*; **Austrian Sch.**, 73 *ab*, 735 *c*, 763 *d*, 814 *cd*, 815 *abcd*, 816 *abc*, 825 *d*, 826 *a*; S. Bailey, 82 *cd*; F. Bastiat, 124 *b*, 764 *a*; E. von Böhm-Bawerk, 815 *d*, 816 *b*, 826 *a*; J. E. Cairnes, 203 *b*, 761 *a*; R. Cantillon, 215 *b*, 732 *c*; H. C. Carey, 225 *d*; mod. Ger. Sch., 763 *d*, 764 *b*; H. Grotius, 656 *b*; F. Wieser, 816 *c*.—**Value** in Use and **Exchange**, Aristotle on, 54 *c*, 762 *d*; J. Locke on, 762 *d*; T. R. Malthus on, 763 *b*; H. K. Marx on, 763 *c*; J. S. Mill on, 393 *d*, 763 *c*; **Physiocrats** on, 762 *d*, 763 *a*; J. B. Say on, 763 *d*; A. Smith on, 763 *ab*.—**Value**, rel. of, to **Utility**, 393 *d*, 570 *a*, 580 *bc*, 759 *d*, 764 *d*-766 *d*; E. B. de Condillac on, 765 *c*; A. A. Cournot on, 765 *d*; T. De Quincey on, 568 *d*-569 *b*; A. J. E.-J. Dupuit on, 654 *ab*, 765 *c*; H. H. Gossen on, 766 *a*; B. Hildebrand on, 765 *c*.

Vauban, S. le P., Seigneur de, on **Dîme royale**: 537 *b*, 583 *abc*.

Vethake, H.: works by, 806 *cd*.

Village communities: **Allmend**, Switz., 23 *d*, 361 *a*; Anglo-Saxon, 26 *a*, 27 *d*, 359 *a*; as Econ. organisation, 302 *d*; Ind., 23 *bc*, 360 *c*; Java, 23 *cd*, 360 *c*, 361 *a*; **Mir**, Russ., 22 *d*, 360 *c*, 361 *a*, 413 *b*.

Villanus or **Villein**: development of **Copyhold**, 544 *bc*; Eng., 25 *a*; **Rent, labour**, commutation of, 28 *c*, 152 *b*, 261 *a*, 407 *a*.

Virginia Co.: 330 *a*, 331 *a*.

Wages: **Allowance syst.**, 33 *b*; and **Black Death**, 28 *c*; 152 *cd*; rel. to **Capital**, 220 *bd*; **Copartnership** to stabilise, 856 *a*; and **Cost of Prodn.**, 437 *bc*, 438 *a*; and **Custom**, 476 *cd*; J. Davidson on wage doctrines of the 19th century, 862 *ab*; W. Denny on, 548 *b*; **Earnings of management** a species of, 667 *d*, 668 *b*; good, effects on **Industry**, 685 *b*; "**Iron law**" of, 337 *d*; Marginal, 597 *c*; and **Peasants' Revolt**, 28 *c*; effects of **Poor** relief on, 265 *c*; and **Profit**, J. Craig on, 858 *a*; Productivity, theory of, I. Butt on, 832 *d*; State reguln. of, 28 *c*, 33 *b*, 152 *cd*; tendency to Uniformity, 601 *a* —**Wages Fund** theory, J. E. Cairnes on, 202 *d*, 203 *b*; and **Capital**, 220 *d*; C. B. di Cavour on, 236 *c*; crit. of, by W. S. Jevons, 735 *c*; crit. of, by F. A. Walker, 735 *c*, 809 *b*.—**Theory of Wages**, N. Appleton, 44 *a*; T. Brassey, 176 *d*; D. Buchanan, 184 *a*; T. H. Buckle, 185 *a*; I. Butt, 832 *d*; and **Distr.**, law of, 601 *b*-602 *c*.—**Trade Unions** and, 390 *d*, 391 *a*, 884 *d*, 885 *d*.

Wakefield, E. G., on Colonisation and **Emigration**, 333 *d*, 334 *a*, 697 *ab*, 701 *a*.

Walker, A.: on **P.E.** as "a business science," 808 *b*.

Walker, F. A.: 809 *bc*; **Comfort, stan. of**, 337 *cd*; functions of **Entrepreneur**, 412 *a*, 705 *bd*, 742 *a*, 809 *b*; **Profit**, 439 *b*, 705 *a*, 735 *c*; **Wages Fund**, 735 *c*, 809 *b*.

Walpole, Sir R.: reform of **Custom**, 787 *b*.—**Excise scheme of Sir R. Walpole**, econ. Merits, 788 *b*; approved by A. Smith, 789 *c*; Unpopularity of, 788 *cd*.

Walras, M. E. L.: **Exchange, Value** in, 766 *c*, 814 *d*; **Mathematical meth.**, 543 *d*, 766 *c*.

War: and **Manchester Sch.**, 317 *a*; loss of **Productive** energy by, 529 *d*, 531 *d*.—The Great War: spread of **Allotments** during, 803 *bc*; increase of **Arable Land** during, 49 *d*; **Armed Neutrality**, 57 *c*; **Blockade**, 521 *c*; **Contraband**, 398 *d*-399 *b*, 521 *c*, 863 *c*-864 *a*; **Decl. of London** modified and abandoned, 863 *cd*; **Domicil of Corporations** investigated, 632 *a*; **Finances of, Budget**, 828 *a*-829 *a*; **Finances of, Conversion of British National Debt**, 830 *a*, 854 *c*-855 *c*; note circulation of **Bank** of France increased, 112 *d*; private ships converted into warships, 520 *d*, 521 *a*; capture of private **Property** at sea, 521 *c*.

Warehousing syst.: **Bonded Warehouses**, 163 *d*, 475 *d*; **Dock**, 612 *b*, 615 *d*.

Wayland, F.: 806 *d*.

Wealth: compd. with **Abundance**, 5 *d*; Aristotle's def. of, 54 *ab*; in rel. to **Consumption**, 393 *d*; material and immaterial, I. Butt on, 832 *d*, 833 *a*; Natural and unnatural, Aristotle on, 54 *b*.—**Immaterial Wealth**, C. Dunoyer on, 651 *b*.—**Wealth**, National, J. Bentham on, 132 *b*; A. Broggia on, 180 *c*; D. Carafa on, 225 *a*; **Census** as statement of, 248 *c*; T. Chalmers on, 255 *a*; D. Diderot on, 578 *b*; T. Hobbes on, 731 *a*; Sources of, 302 *c*.—**Wealth**, Theory of, G. Berkeley, 134 *d*; E. Burke, 195 *b*; Dialogue *Eryxias*, 54 *d*; **Physiocrats**, 27 *c*.

West, Sir E., on law of **Dimin. returns**: 585 *c*.

West India Dock Co., 612 *abc*.

Whateley, R.: on **Definitions**, 534 *b*; **P.E.** as sci. of **Exchange**, or **Catallactics**, 233 *c*, 735 *b*.

Wieser, F. von: on **Capital** and **Interest**, 816 *d*, 817 *a*; distinguishes between specific and general imputation, 816 *a*; theory of **Income**, 816 *d*-817 *a*; not an individualist, 815 *a*; law of **Marginal Utility**, 815 *b*, 816 *ad*; theory of **Money**, 816 *cd*; law of **Prices** for monetary transactions, 816 *b*; relation of **State** and world **Economics**, 817 *ab*; theory of **Value**, 815 *bd*, 816 *ac*.

Will: **Administration, letters of**, 14 *d*, 15 *a*; of **Aliens**, charges on, 68 *c*, 572 *cd*; **Bona notabilia**, 17th centy., 163 *a*; **Executor**, 789 *d*.—**Will, Bequest by**, Feudal syst., 133 *d*; **Roman** and Eng. **Law**, 133 *d*.

Wilson, W., President, U.S.A.: and **Armed Neutrality**, 57 *c*.

Winfield, P. H.: on **Conspiracy**, 391 *b*.

Witt, J. de: life **Annuity**, 545 *a*, 657 *b*.

Wolowski, L. F. M. R., on **Bimetallism**: 276 *d*.
Women, married, **property** of: 8 *b*, 504 *d*, 588 *c*; Act of 1870, 450 *c*; Common law, 450 *b*.
Wood, W., patent, and J. Swift's **Drapier's Letters**: 639 *d*, 732 *a*.
Wool **trade**, Eng.: with **Colonies**, 69 *a*; and **Conversion of arable land into pasture**, 407 *b*, 710 *b*; effects of **Cotton Famine**, 441 *a*; and **Exports**, restraint on, 341 *d*, 794 *b*; and **Import Duties**, 125 *a*, 341 *d*, 474 *d*; **competition** of Irel., 87 *a*; and **Staple**, 16 *c*, 342 *ab*; and **Trade, foreign, regulns, of**, medvl., 722 *a*.
Workmen's Budgets, D. Davies: 484 *d*.
Workmen's **Compensation**: 381 *b*, 811 *b*.
Works, public; H. C. Emmery de Sept Fontaines on, 703 *b*.

Young, A., on **Agriculture**: 90 *a*.

Zunft: compd. with **Gilds**, Ger., 431 *bc*; Hist., 431 *cd*.

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